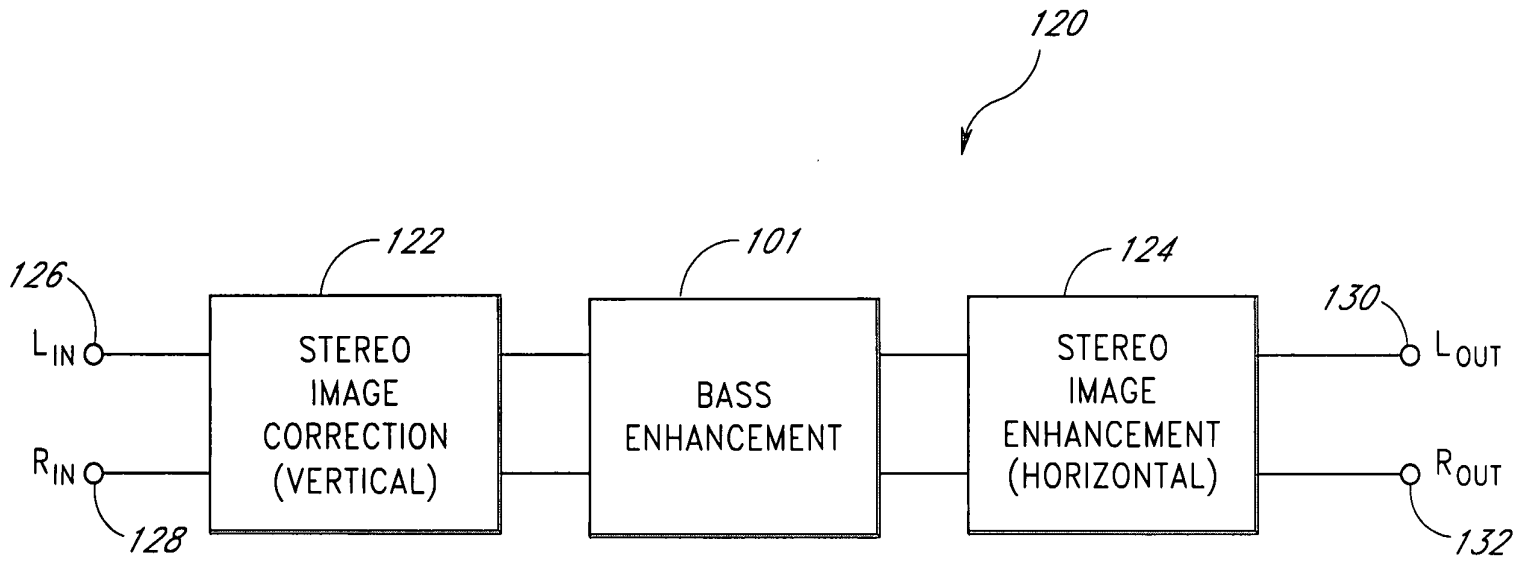


FIG. 1

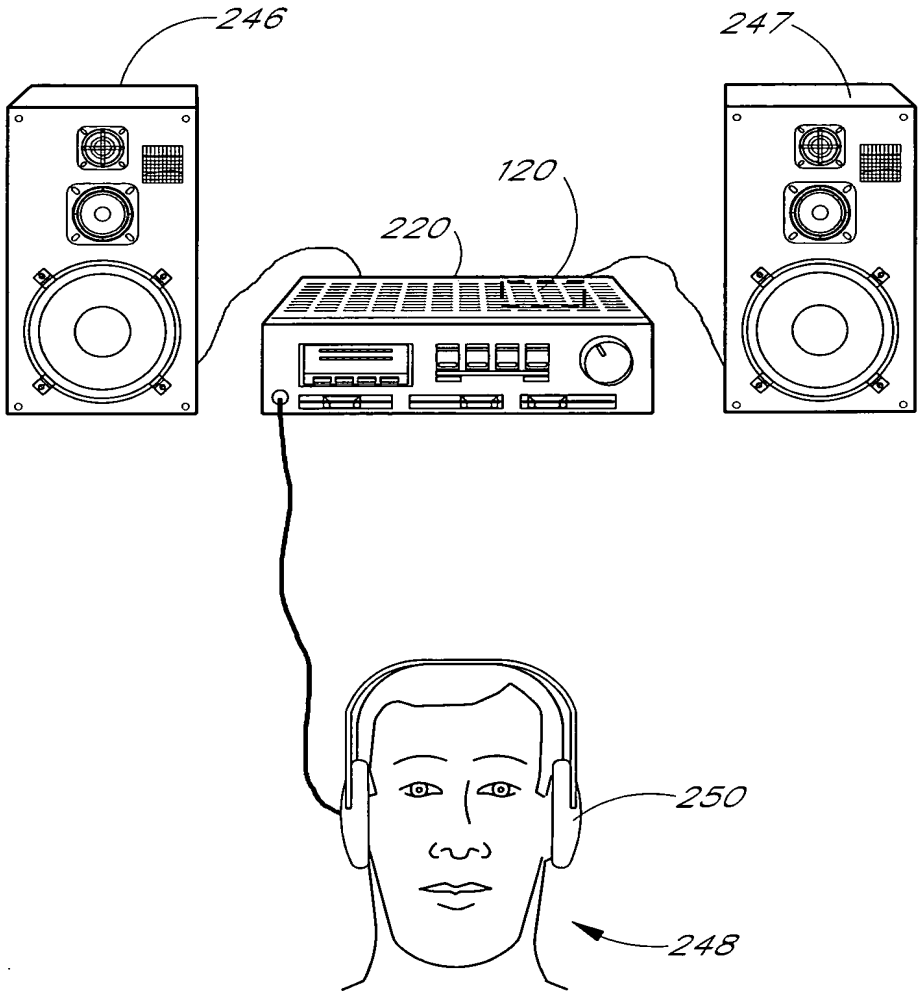


FIG. 2

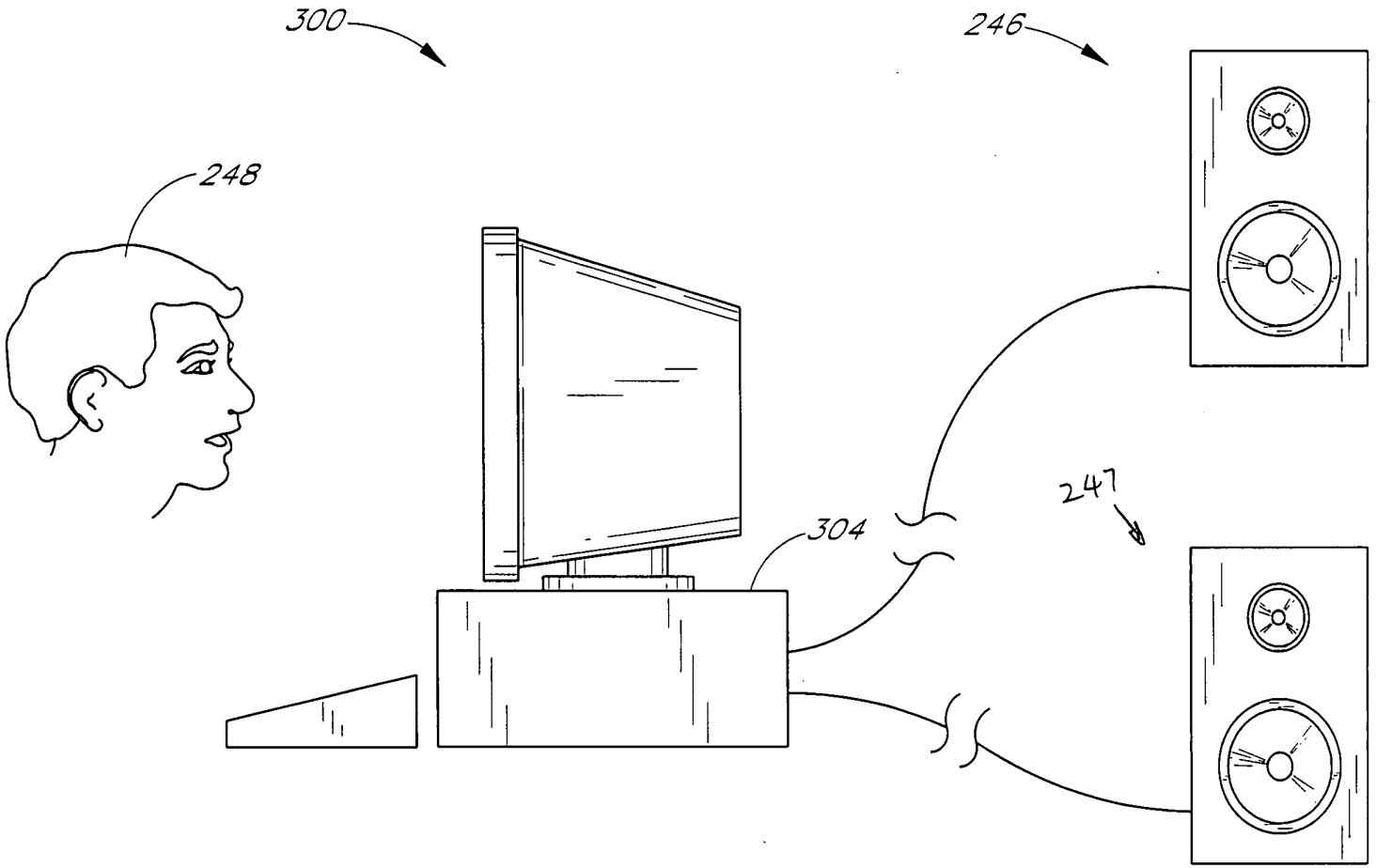


FIG. 3

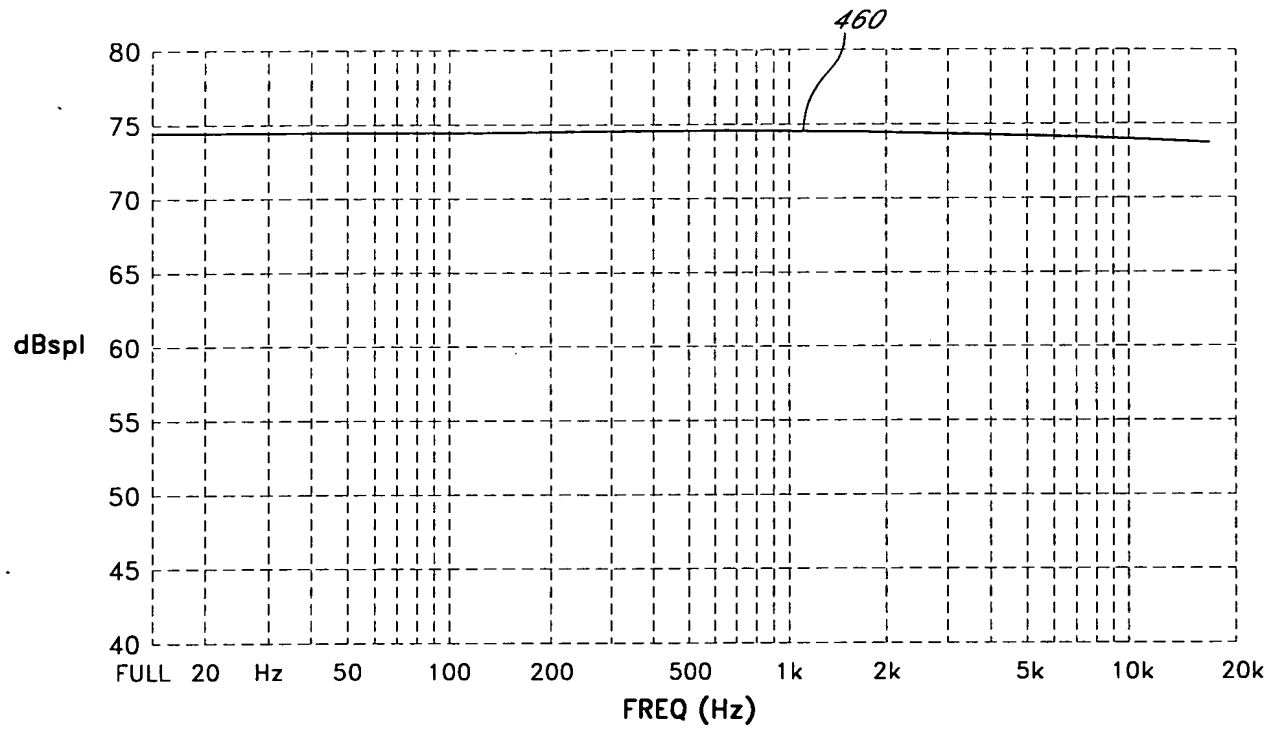

460
80
75
70
65
dBspl
60
55
50
45
40
FULL 20 Hz 50 100 200 500 1k 2k 5k 10k 20k
FREQ (Hz)

FIG.4A

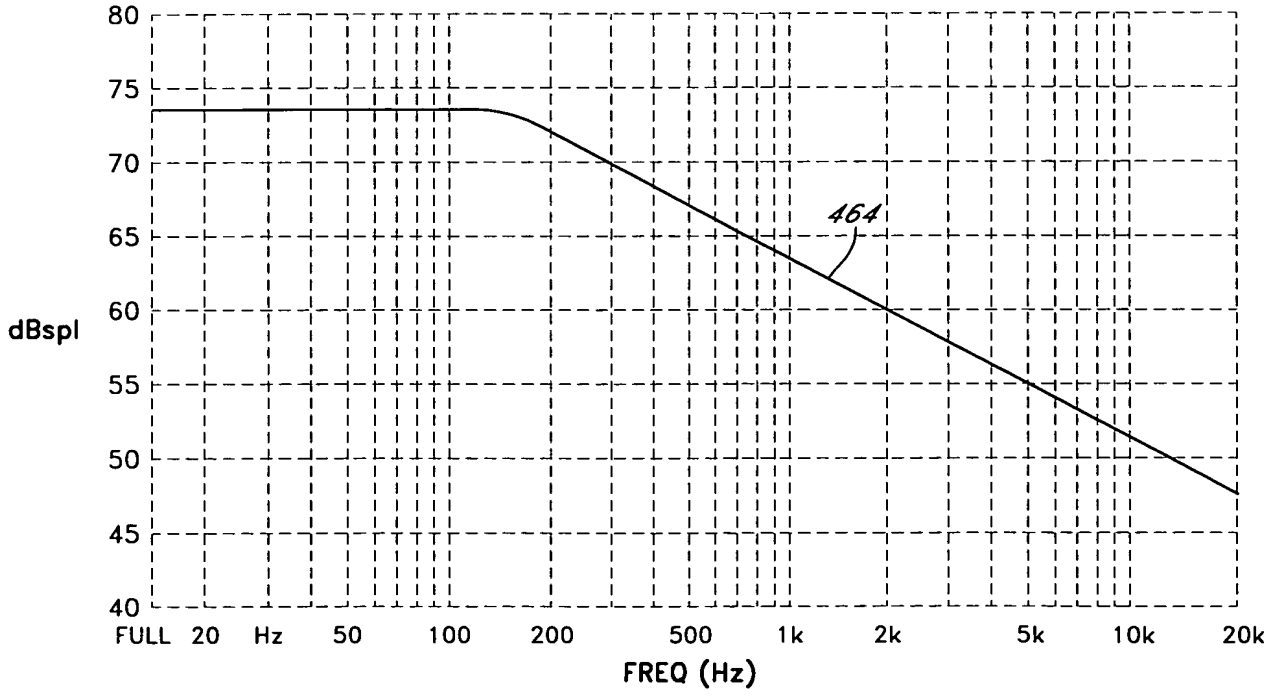

80
75
70
464
65
dBspl
60
55
50
45
40
FULL 20 Hz 50 100 200 500 1k 2k 5k 10k 20k
FREQ (Hz)

FIG.4B

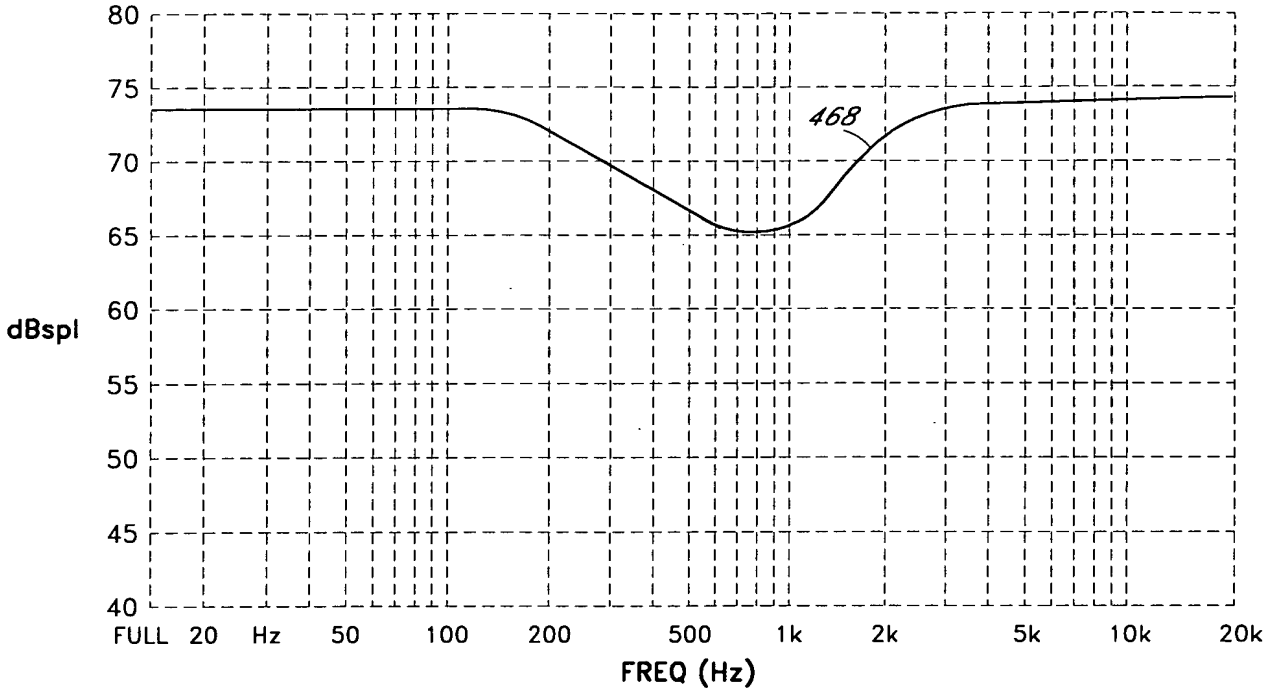

80
75
70
65
60
55
50
45
40
dBspl
468
FULL
20
Hz
50
100
200
500
1k
2k
5k
10k
20k
FREQ (Hz)

FIG.4C

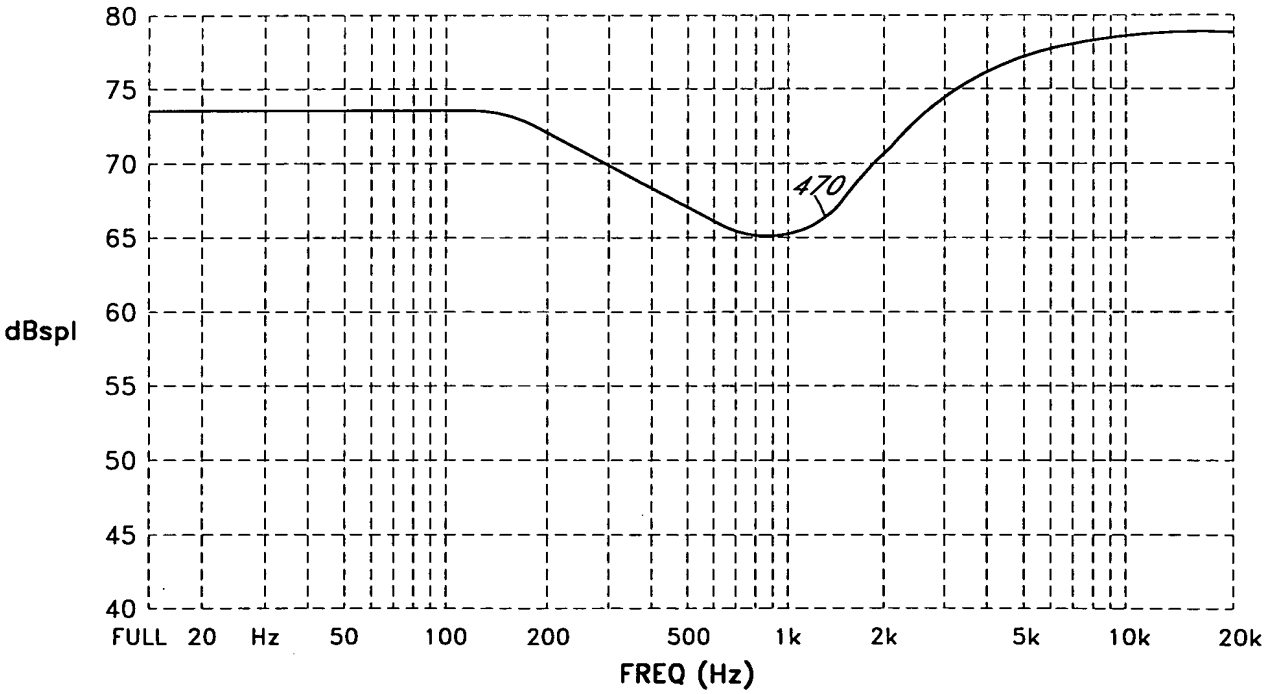

80
75
70
65
60
55
50
45
40
dBspl
470
FULL
20
Hz
50
100
200
500
1k
2k
5k
10k
20k
FREQ (Hz)

FIG.4D

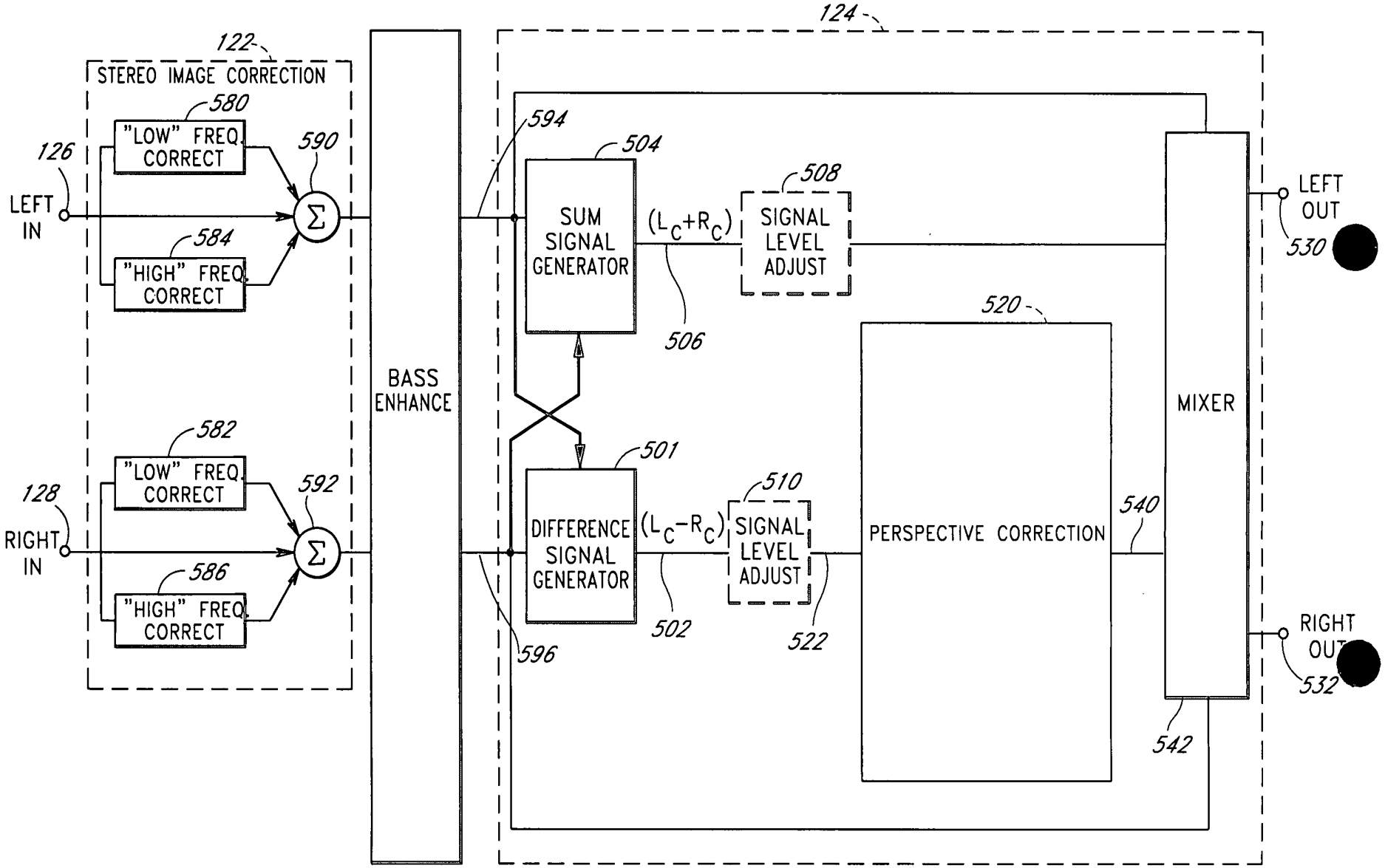

124
122
STEREO IMAGE CORRECTION
580
"LOW" FREQ. CORRECT
590
126
LEFT IN
584
"HIGH" FREQ. CORRECT
582
"LOW" FREQ. CORRECT
592
128
RIGHT IN
586
"HIGH" FREQ. CORRECT
BASS ENHANCE
594
504
SUM SIGNAL GENERATOR
(L_C+R_C)
508
SIGNAL LEVEL ADJUST
506
501
DIFFERENCE SIGNAL GENERATOR
(L_C-R_C)
510
SIGNAL LEVEL ADJUST
502
522
596
520
PERSPECTIVE CORRECTION
540
MIXER
542
LEFT OUT
530
RIGHT OUT
532

FIG. 5

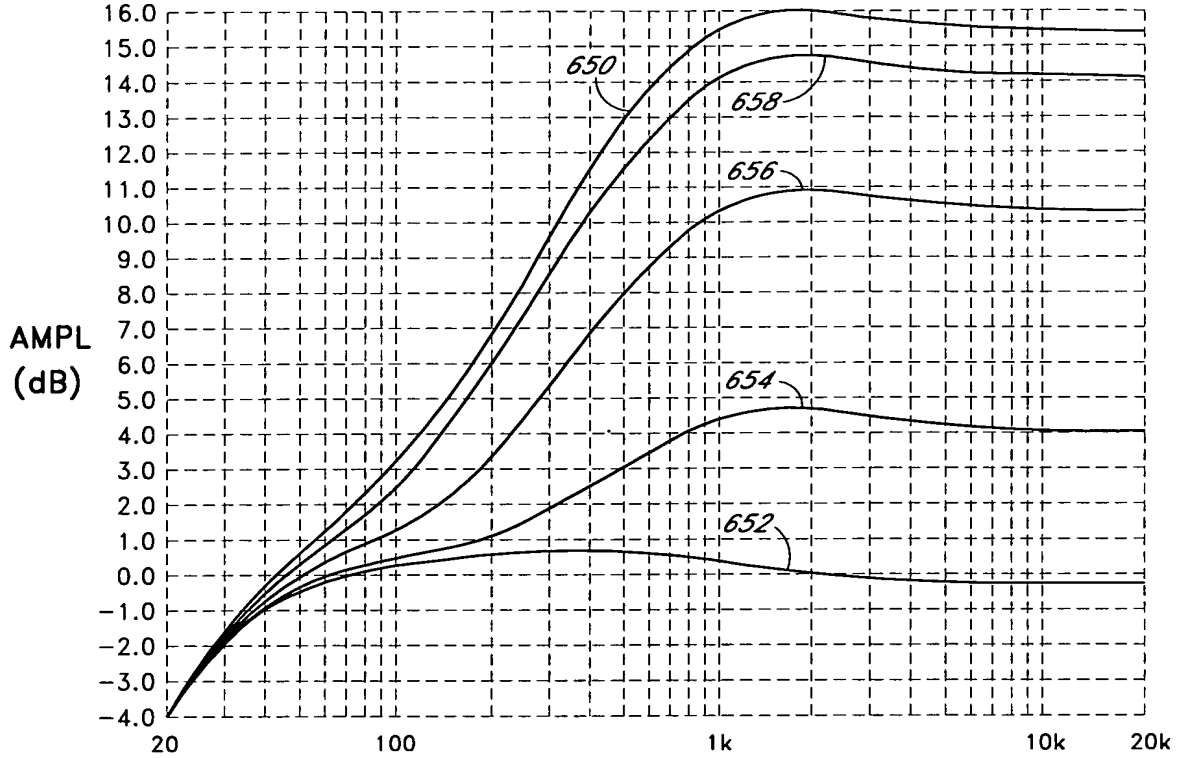

16.0
15.0
14.0
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
−1.0
−2.0
−3.0
−4.0
AMPL
(dB)
650
658
656
654
652
20
100
1k
10k
20k
FREQ
(Hz)

FIG.6A

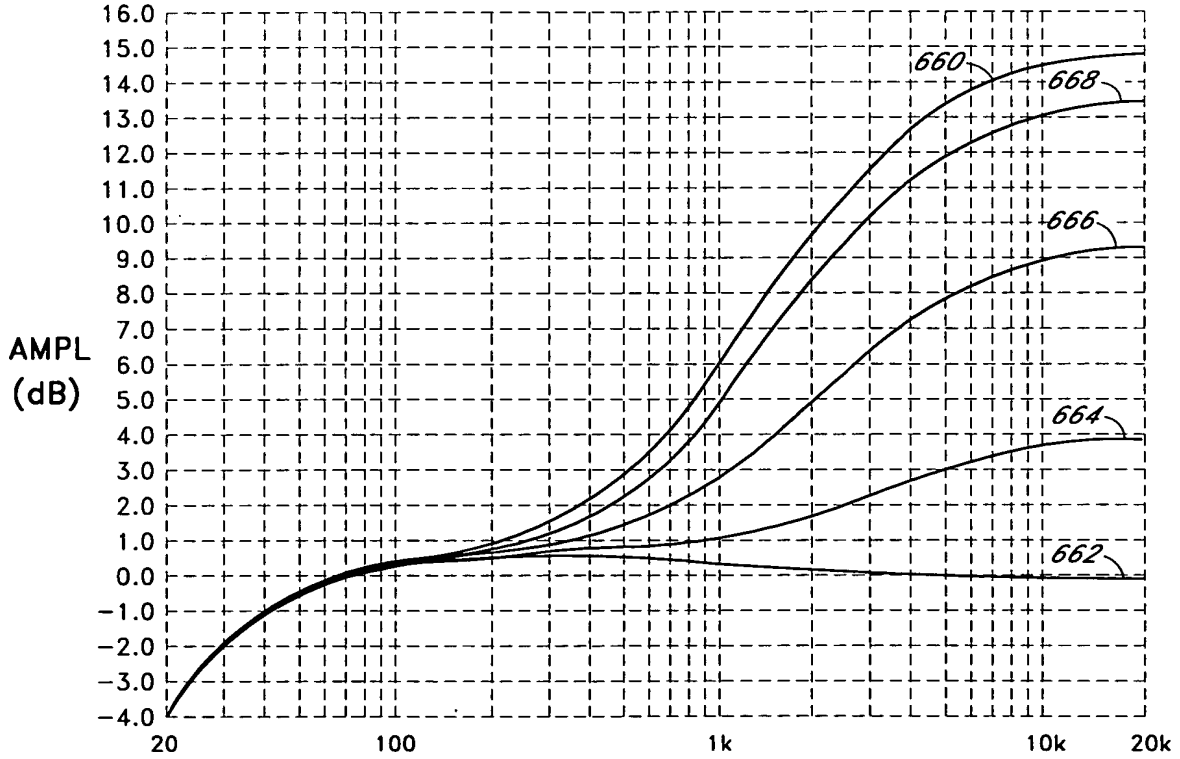

16.0
15.0
14.0
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
−1.0
−2.0
−3.0
−4.0
AMPL
(dB)
660
668
666
664
662
20
100
1k
10k
20k
FREQ (Hz)

FIG.6B

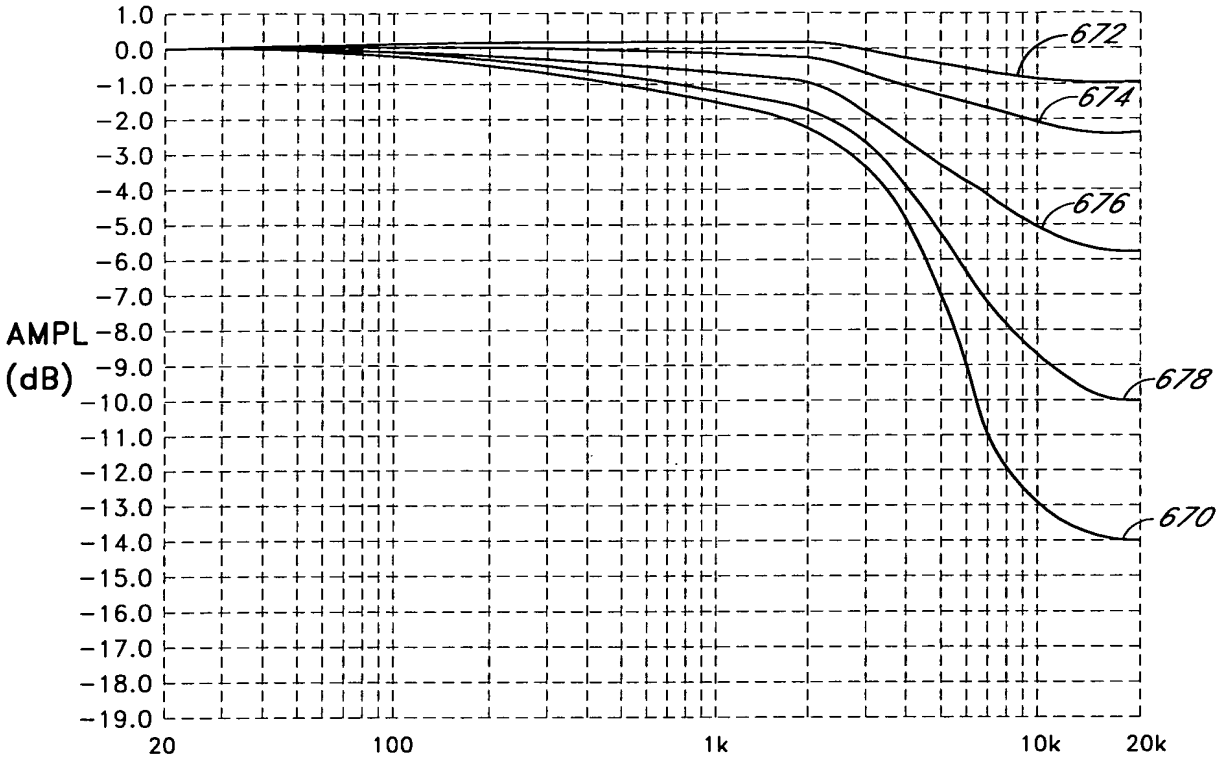

1.0
0.0
-1.0
-2.0
-3.0
-4.0
-5.0
-6.0
-7.0
-8.0
-9.0
-10.0
-11.0
-12.0
-13.0
-14.0
-15.0
-16.0
-17.0
-18.0
-19.0
AMPL
(dB)
20
100
1k
10k
20k
FREQ (Hz)
672
674
676
678
670

FIG. 6C

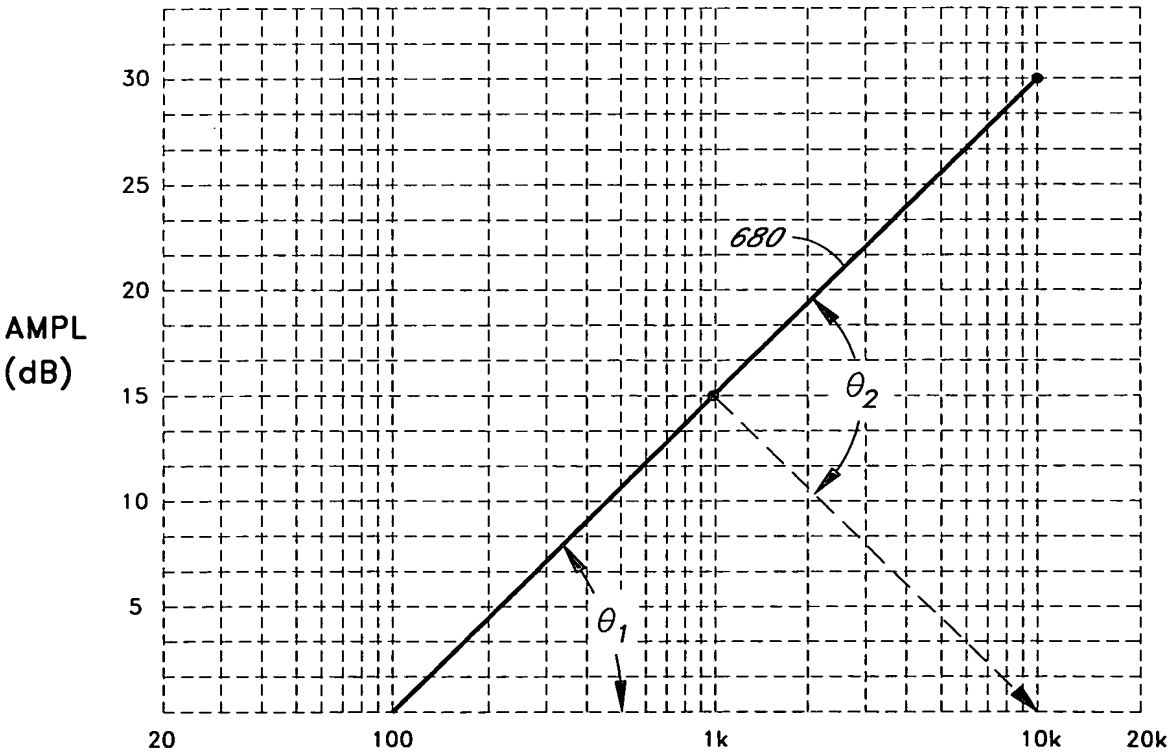
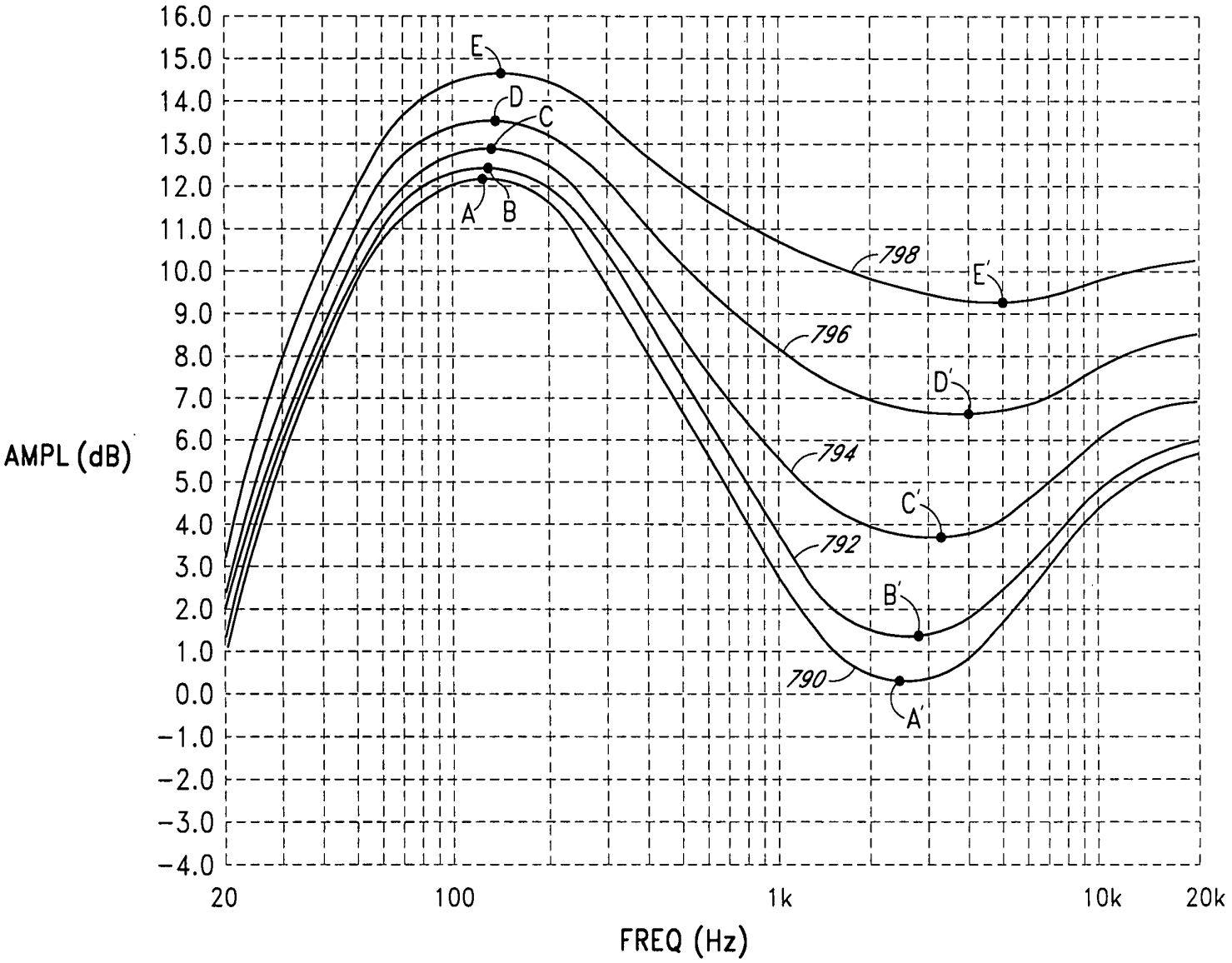

30
25
20
15
10
5
AMPL
(dB)
20
100
1k
10k
20k
FREQ (Hz)
680
θ_1
θ_2

FIG. 6D

FIG. 7


16.0
15.0
14.0
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
-1.0
-2.0
-3.0
-4.0
AMPL (dB)
20
100
1k
10k
20k
FREQ (Hz)
E
D
C
B
A
798
796
794
792
790
E'
D'
C'
B'
A'

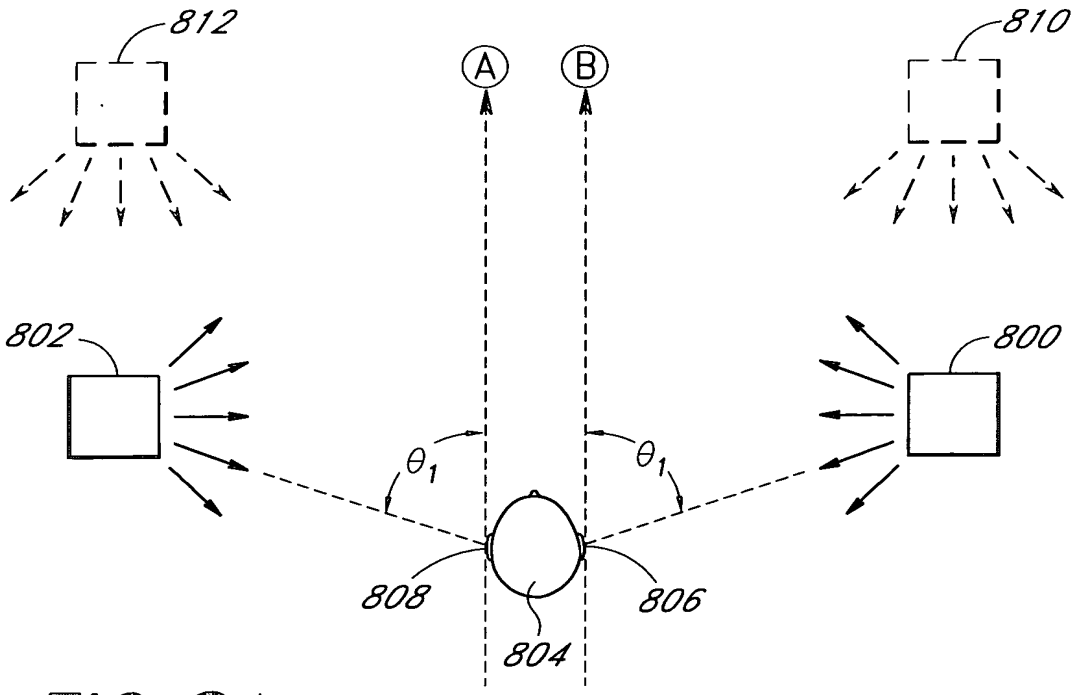

812
810
A
B
802
800
θ_1
θ_1
808
806
804

FIG. 8A

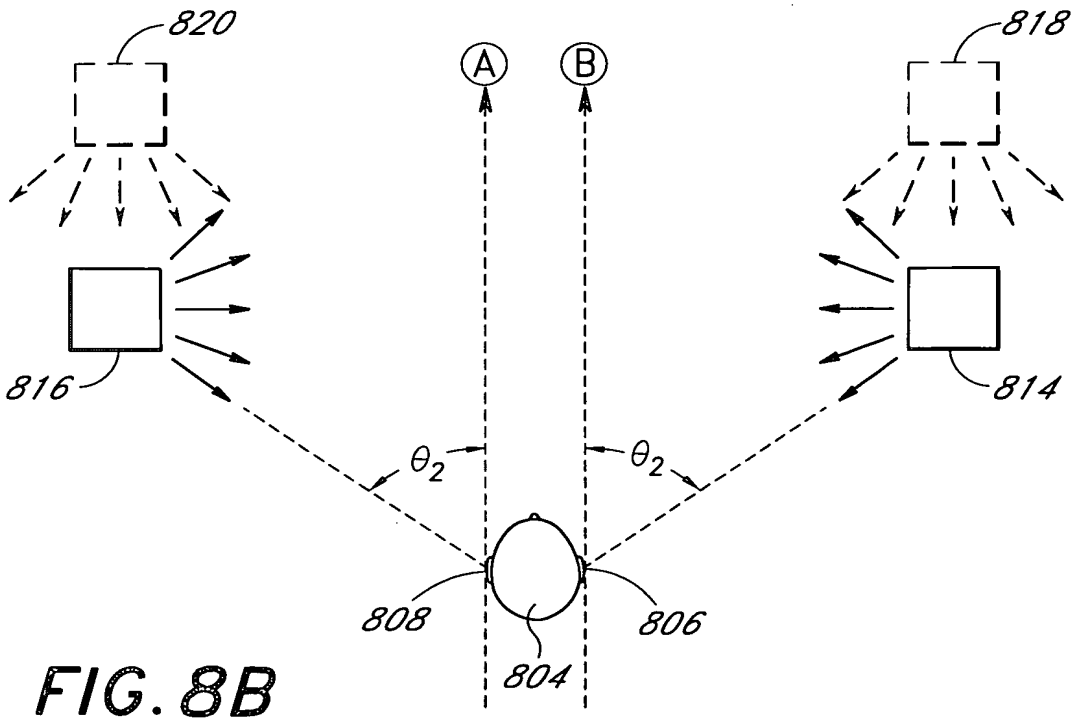

820
818
A
B
816
814
θ_2
θ_2
808
806
804

FIG. 8B

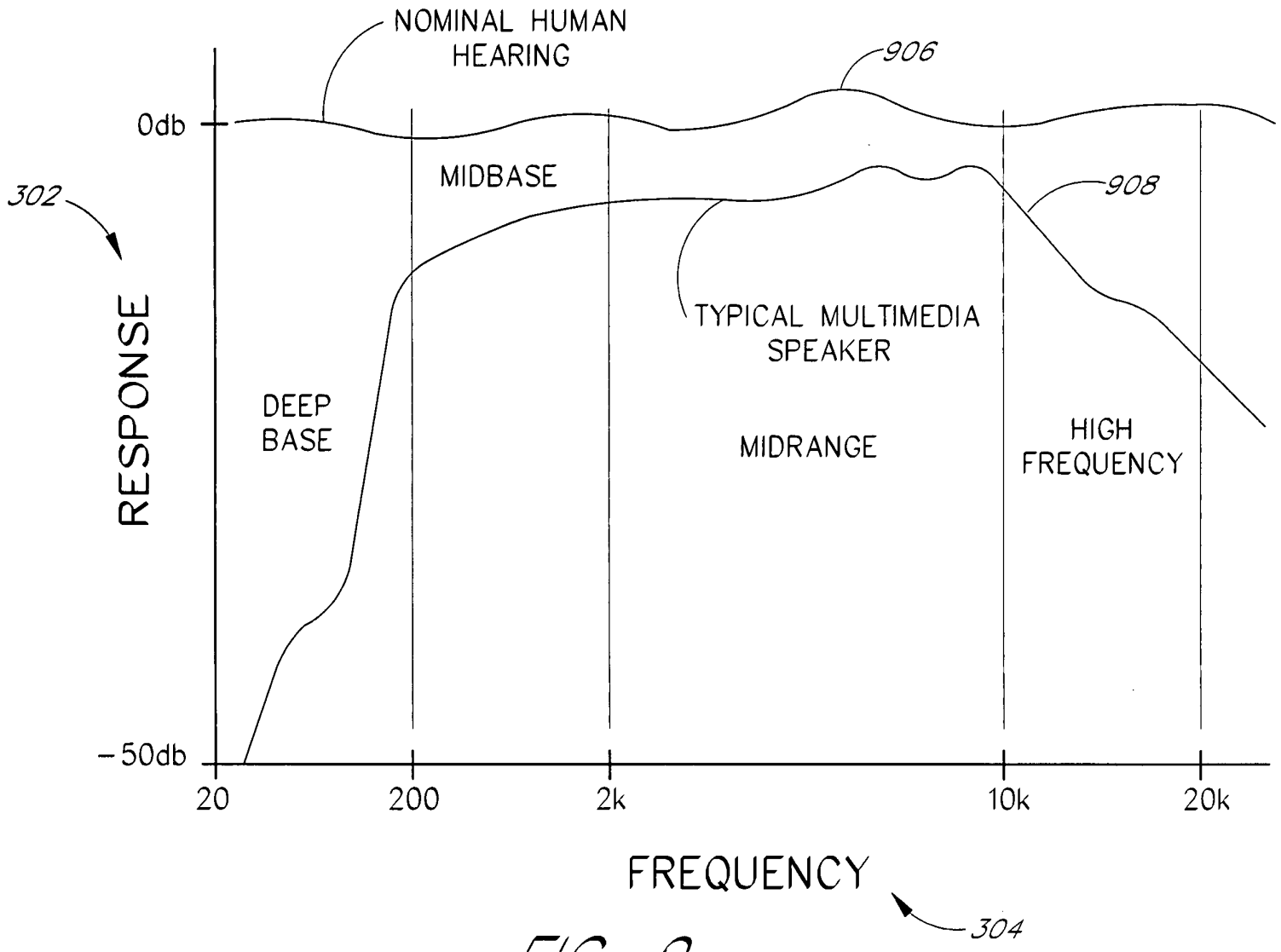


FIG. 9

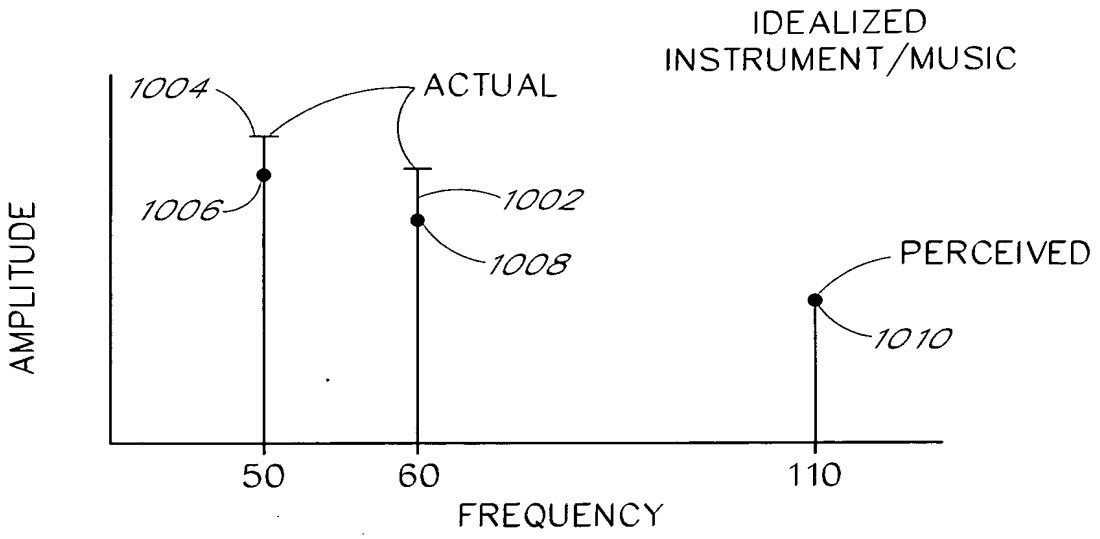

IDEALIZED
INSTRUMENT/MUSIC
1004
ACTUAL
1006
1002
1008
PERCEIVED
1010
AMPLITUDE
50
60
110
FREQUENCY

FIG. 10

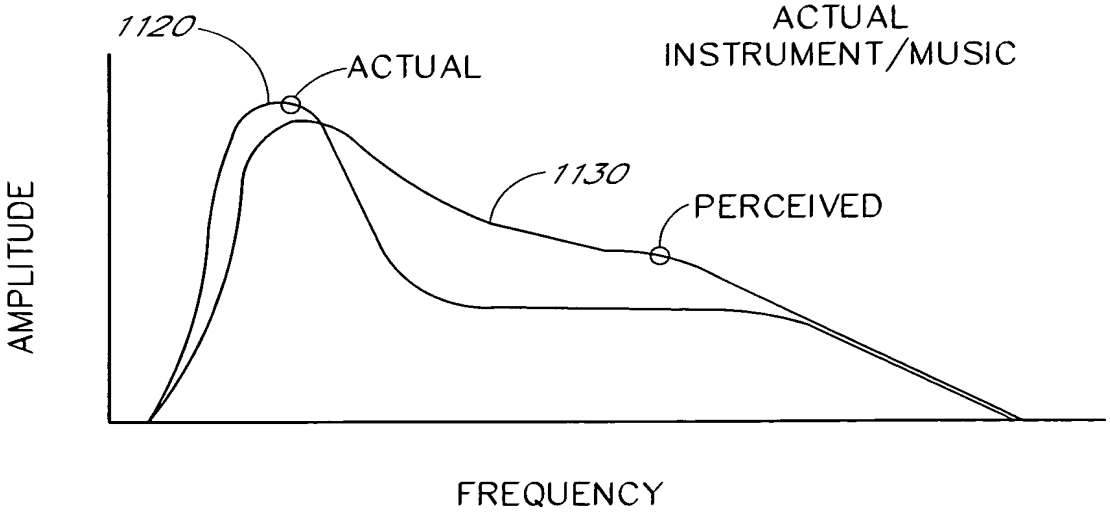

1120
ACTUAL
ACTUAL
INSTRUMENT/MUSIC
1130
PERCEIVED
AMPLITUDE
FREQUENCY

FIG. 11

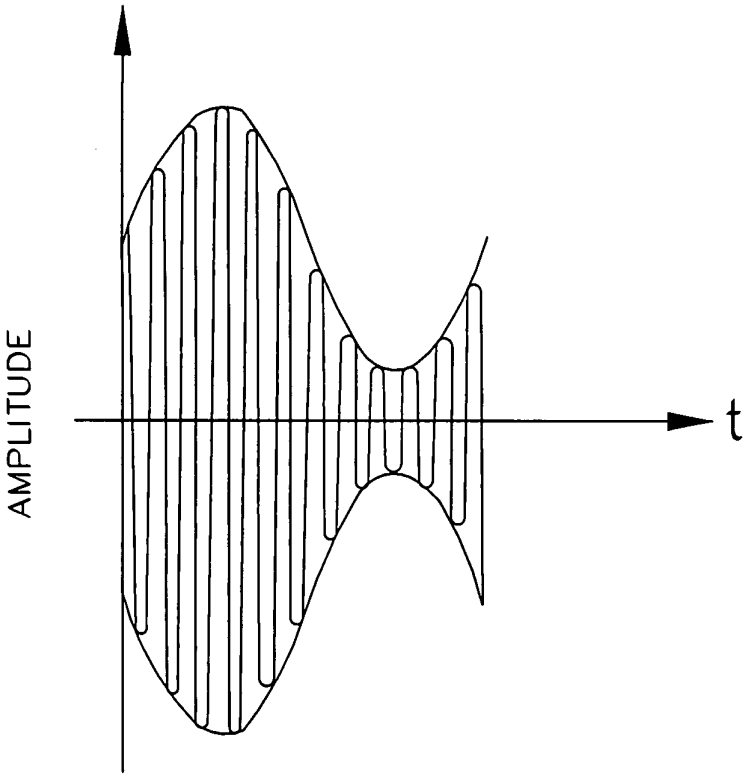


FIG. 12A

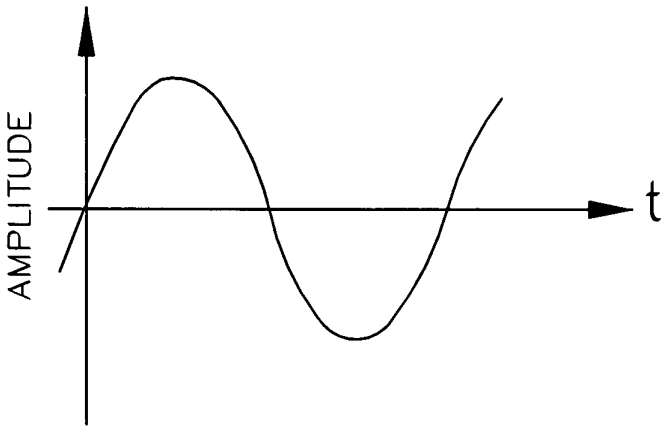


FIG. 12B

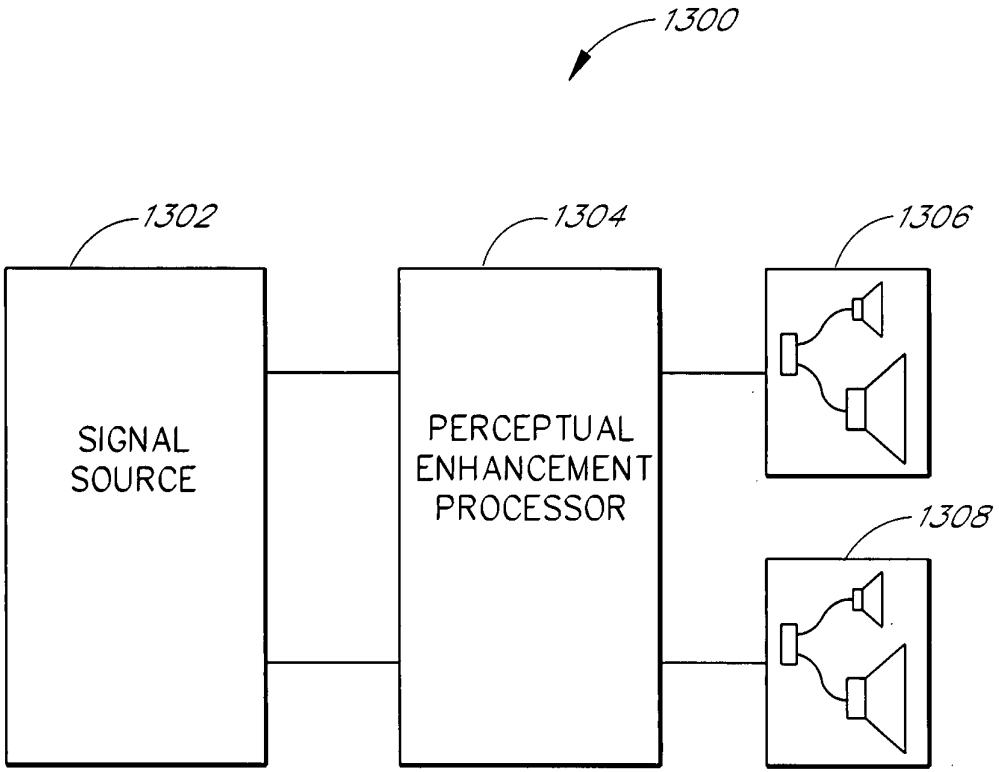


FIG. 13A

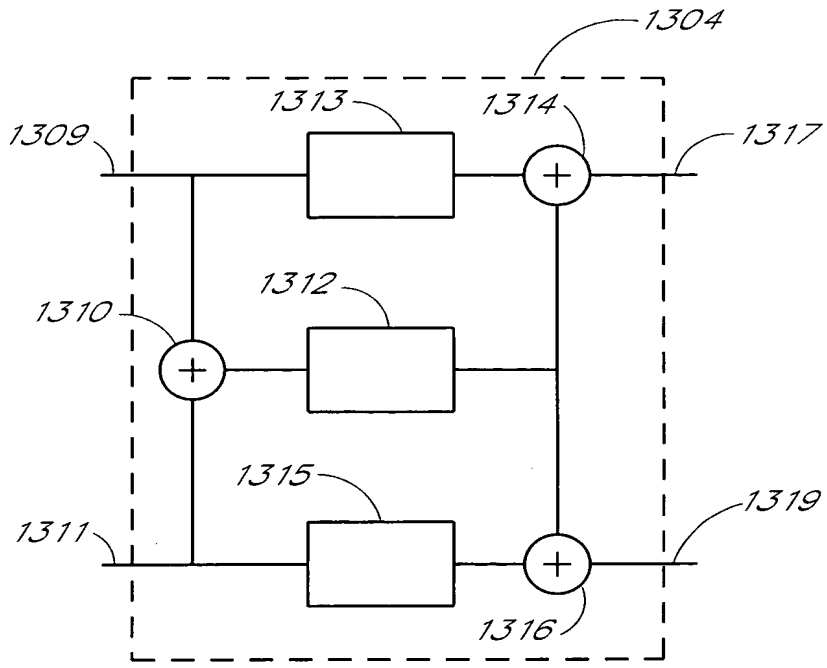


FIG. 13B

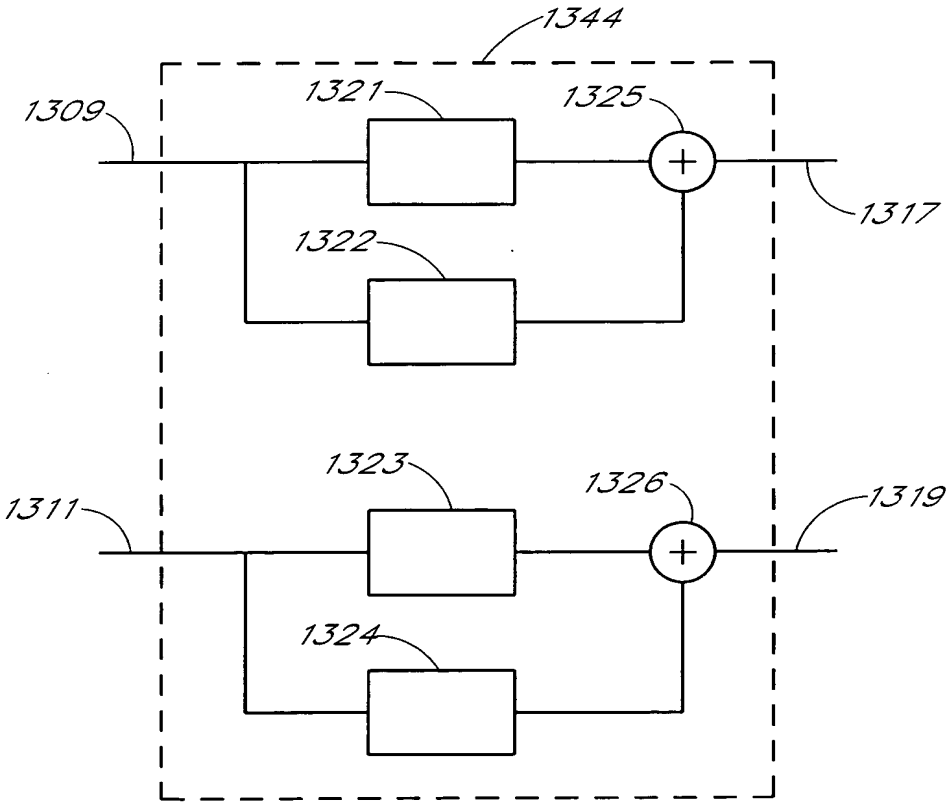


FIG. 13C

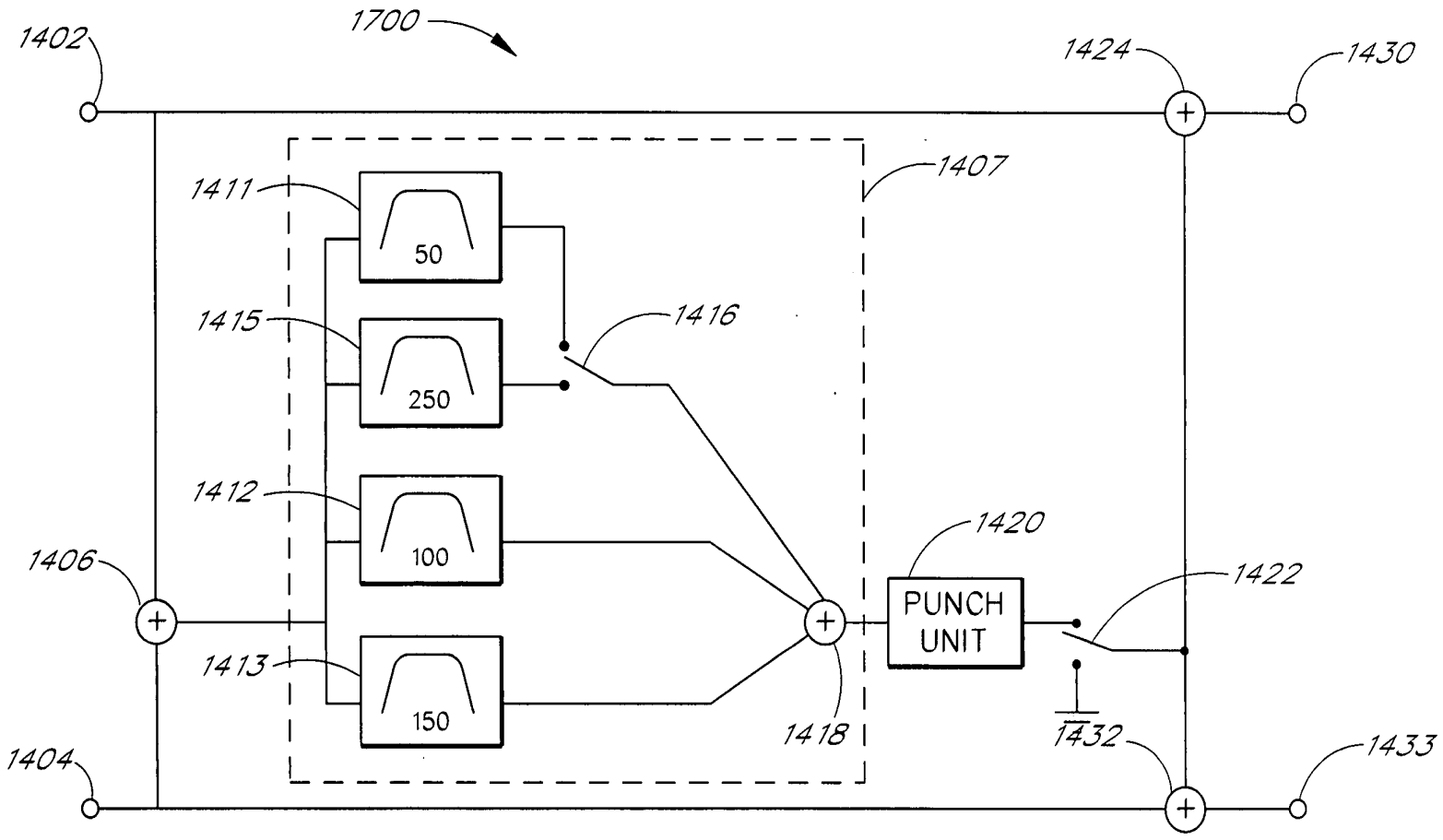


FIG. 14

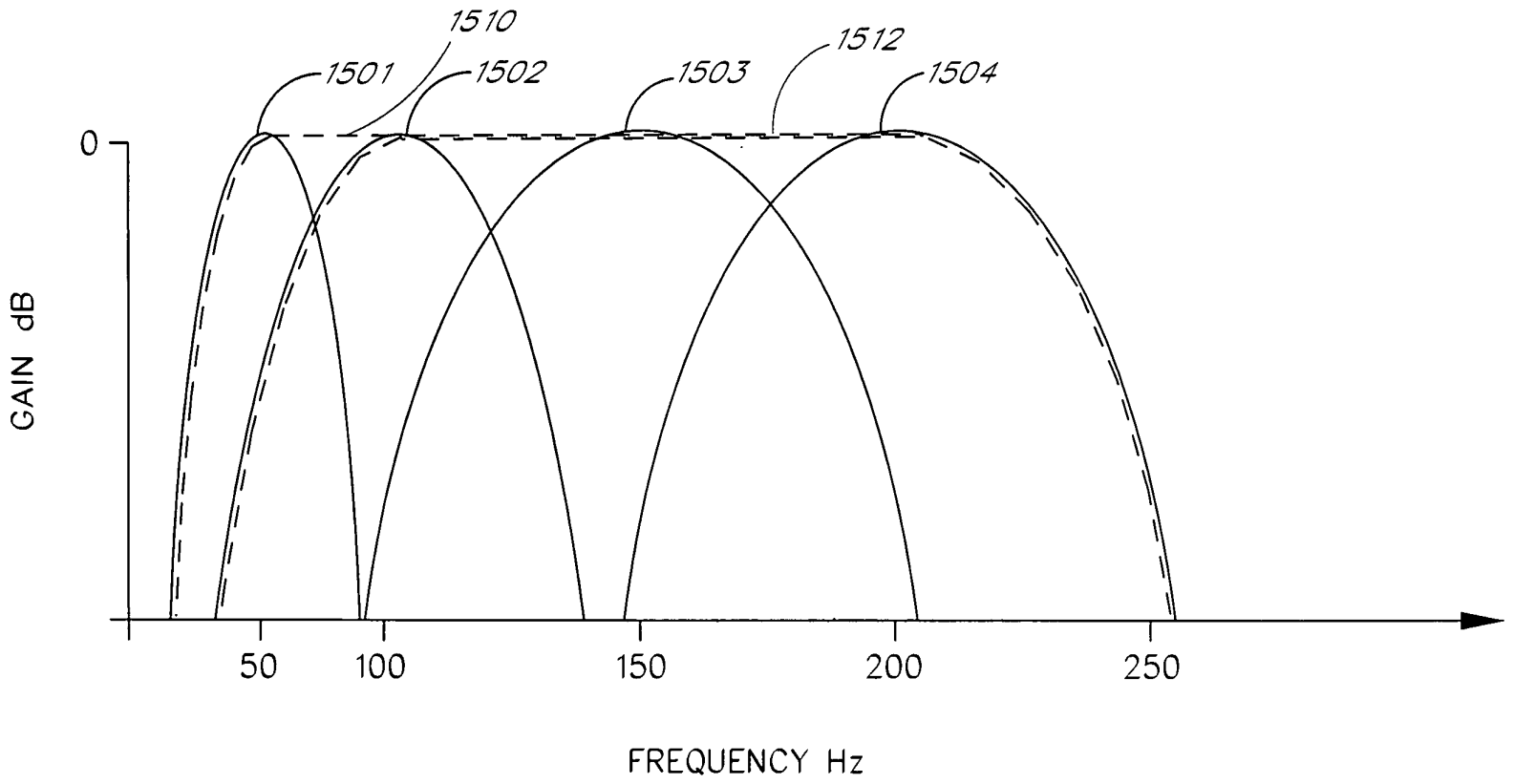


FIG. 15

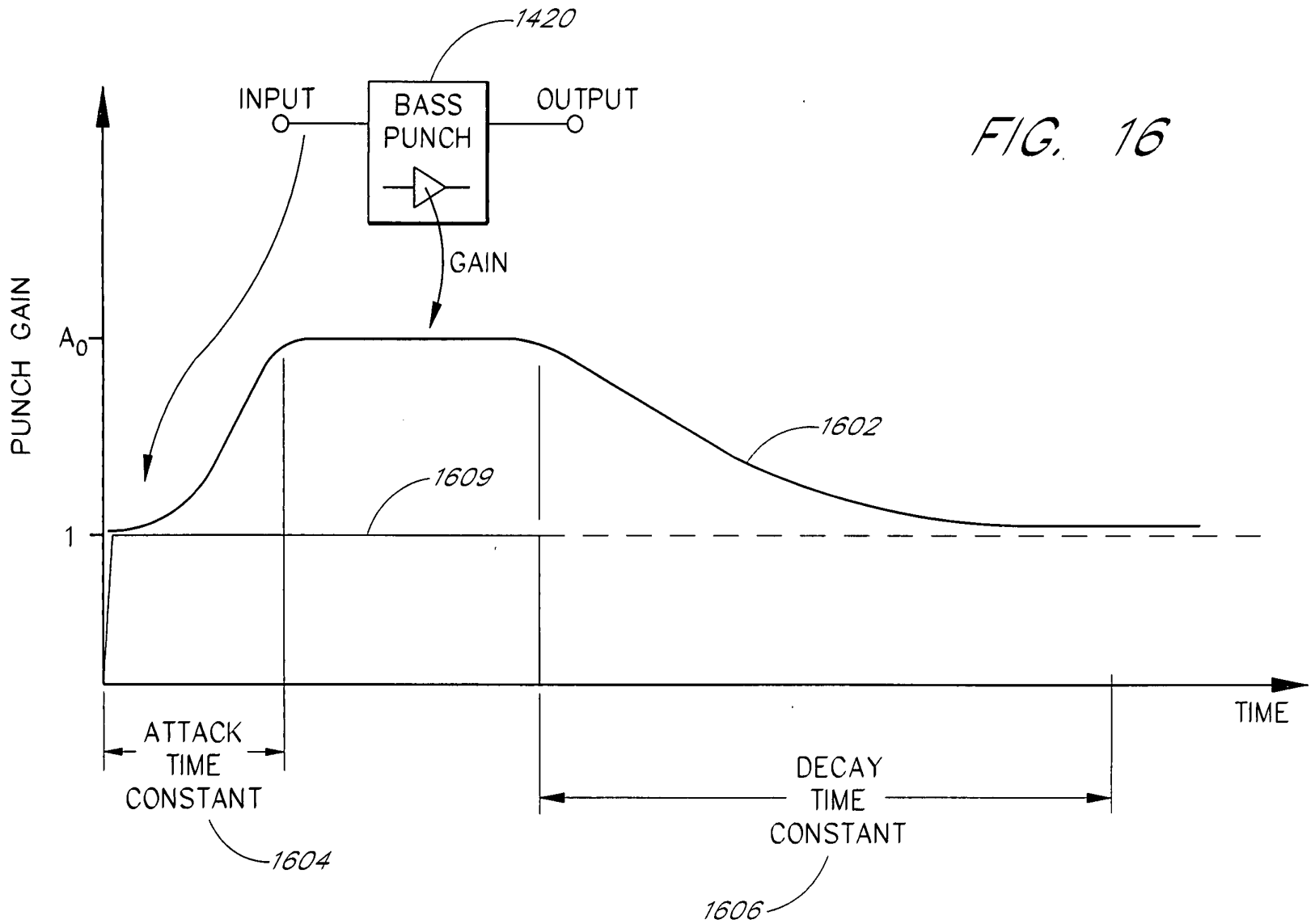


FIG. 16

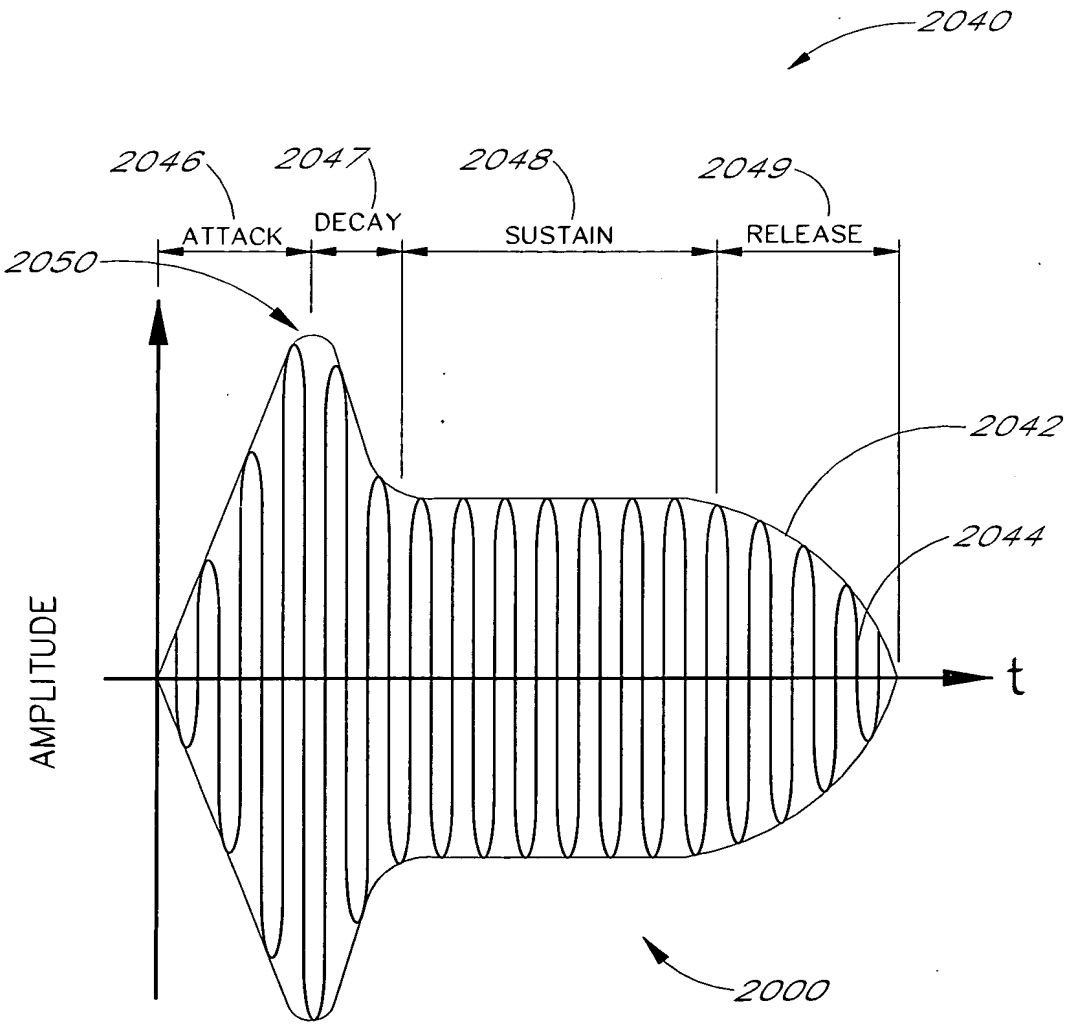

2040
2046
2047
2048
2049
ATTACK
DECAY
SUSTAIN
RELEASE
2050
2042
2044
AMPLITUDE
t
2000

FIG. 17

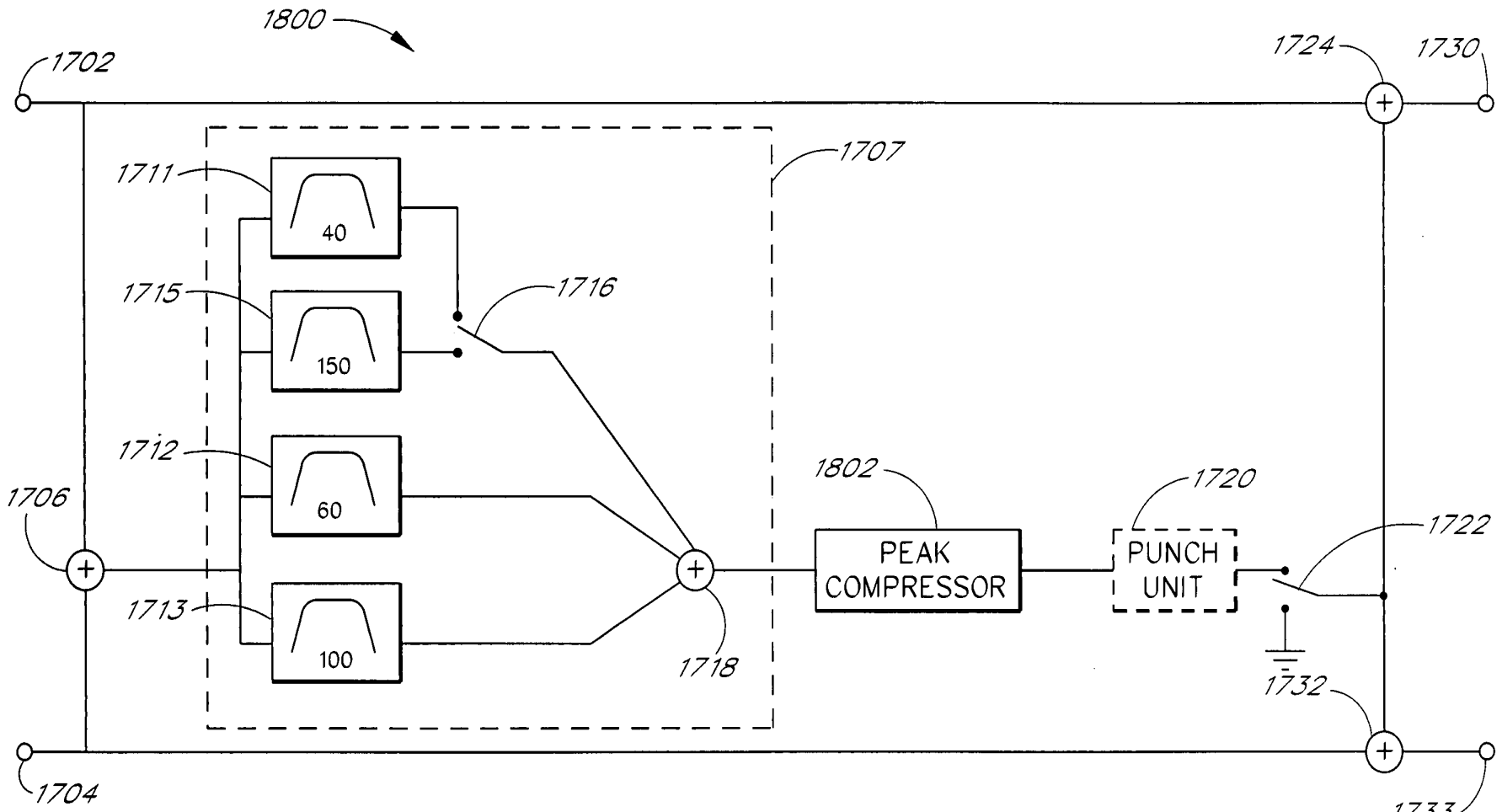

1800
1702
1724
1730
1707
1711
40
1715
150
1716
1712
60
1706
1802
1720
1722
PEAK
COMPRESSOR
PUNCH
UNIT
1713
100
1718
1732
1704
1733

FIG. 18

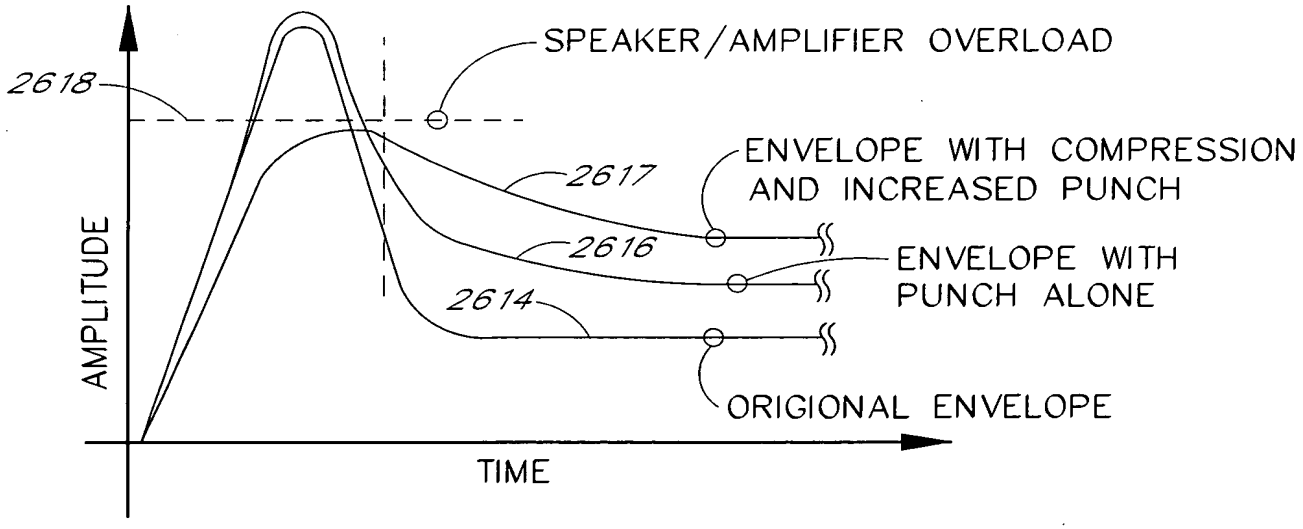

SPEAKER/AMPLIFIER OVERLOAD
2618
2617
ENVELOPE WITH COMPRESSION AND INCREASED PUNCH
2616
ENVELOPE WITH PUNCH ALONE
2614
ORIGIONAL ENVELOPE
AMPLITUDE
TIME

FIG. 19

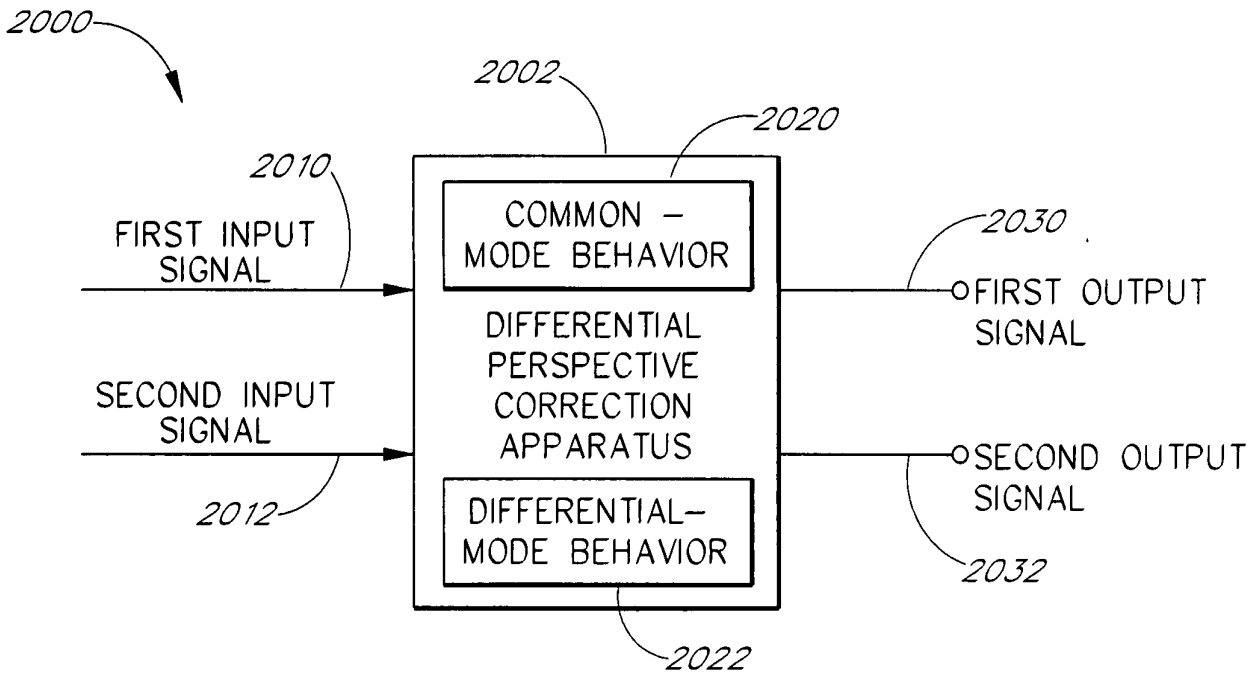


FIG. 20

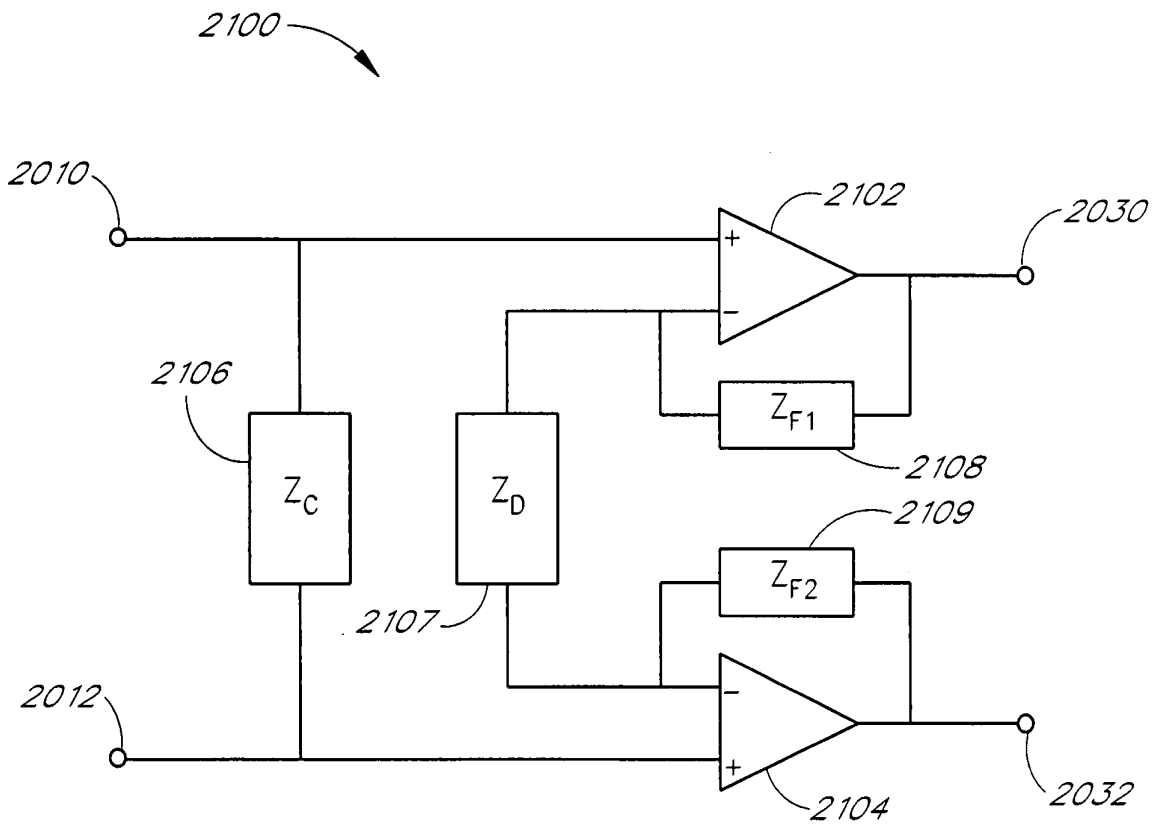


FIG. 21

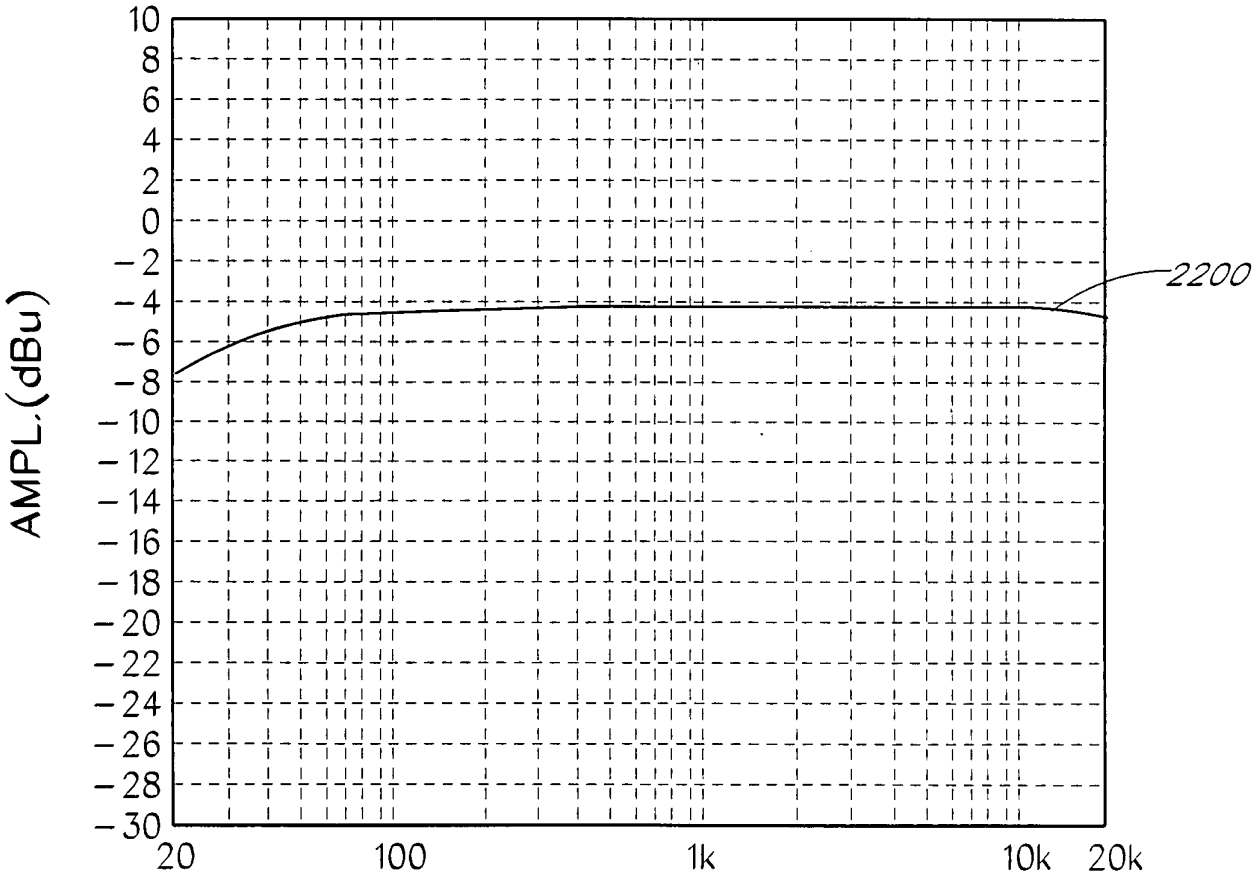

10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-30
AMPL.(dBu)
20
100
1k
10k
20k
FREQ. (Hz)
2200

FIG. 22

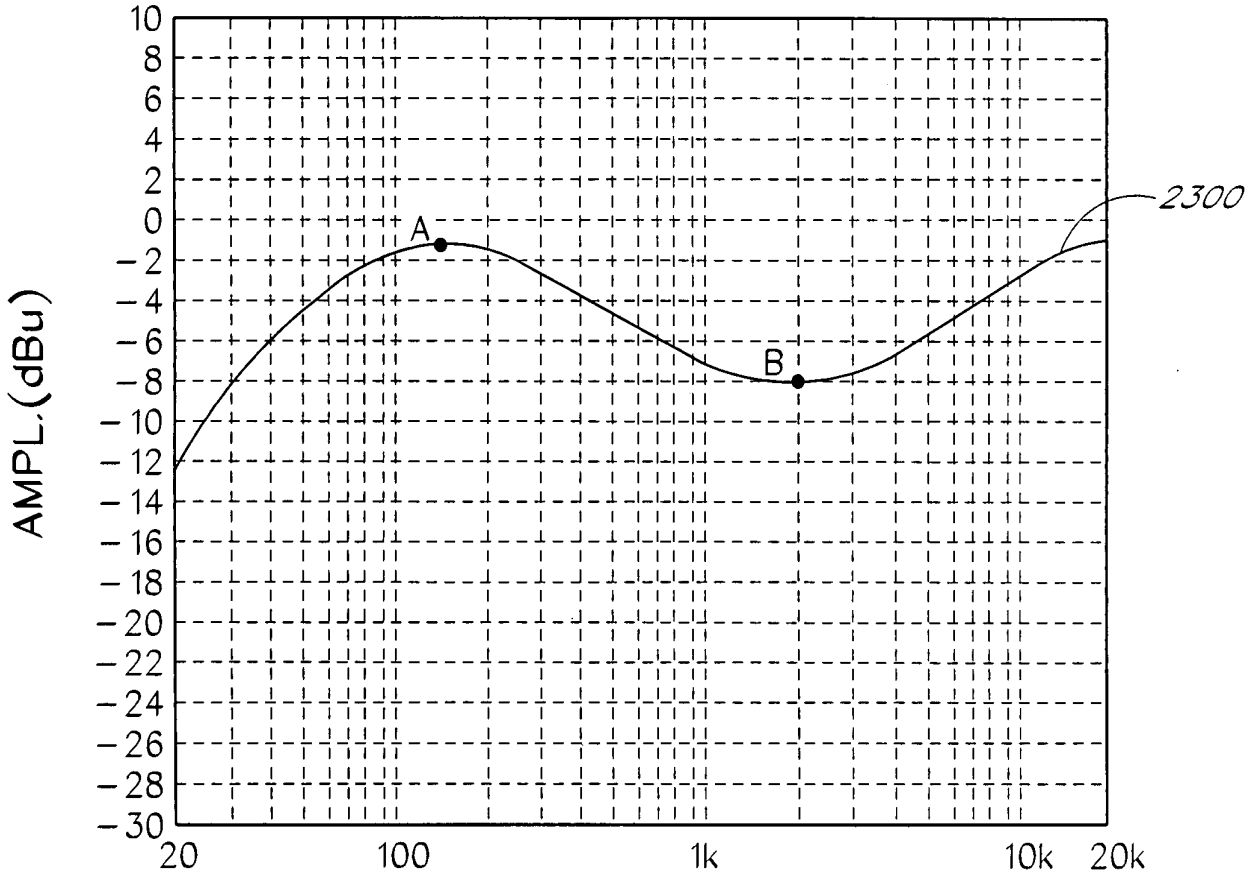


FIG. 23

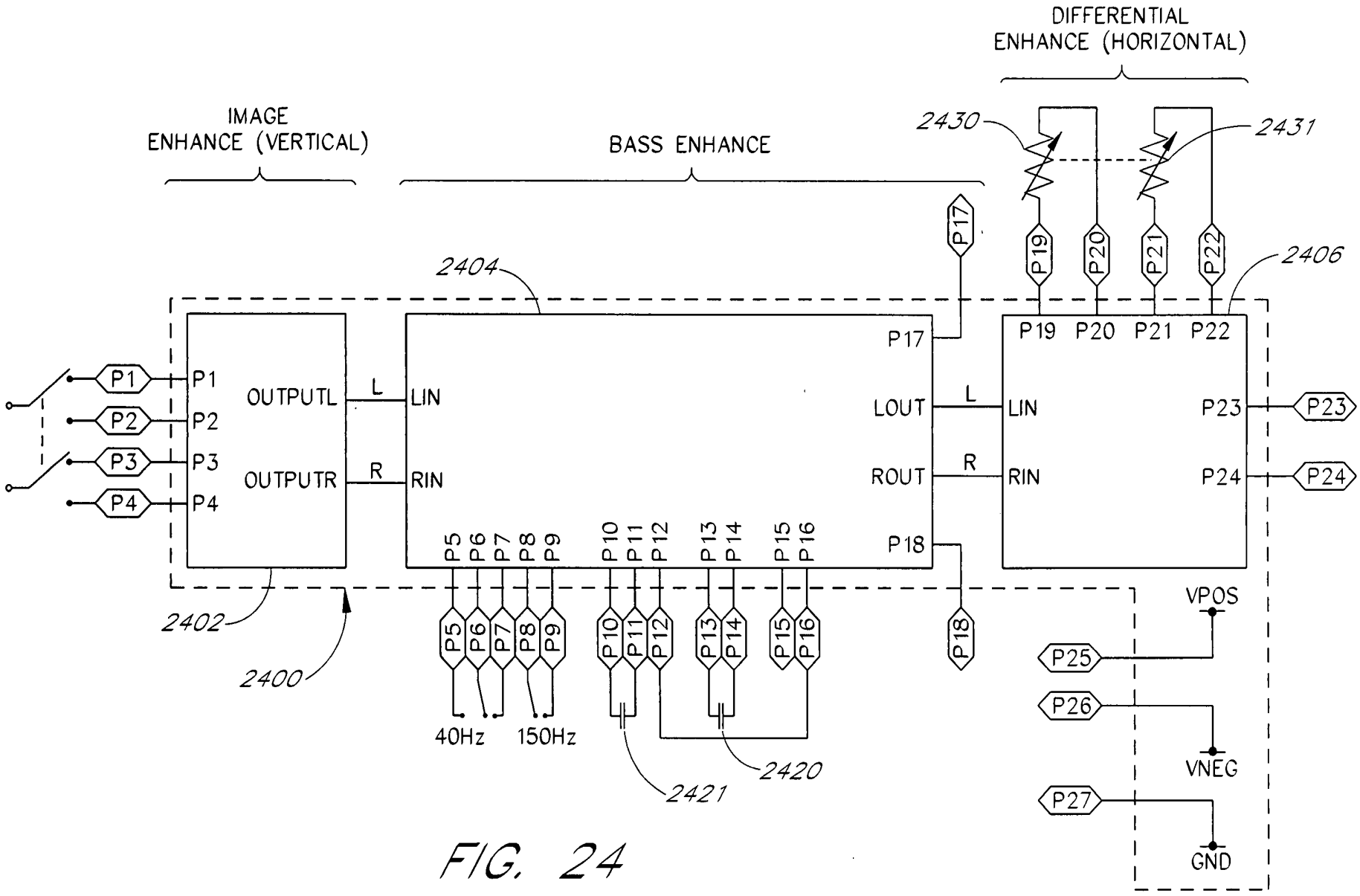


FIG. 24

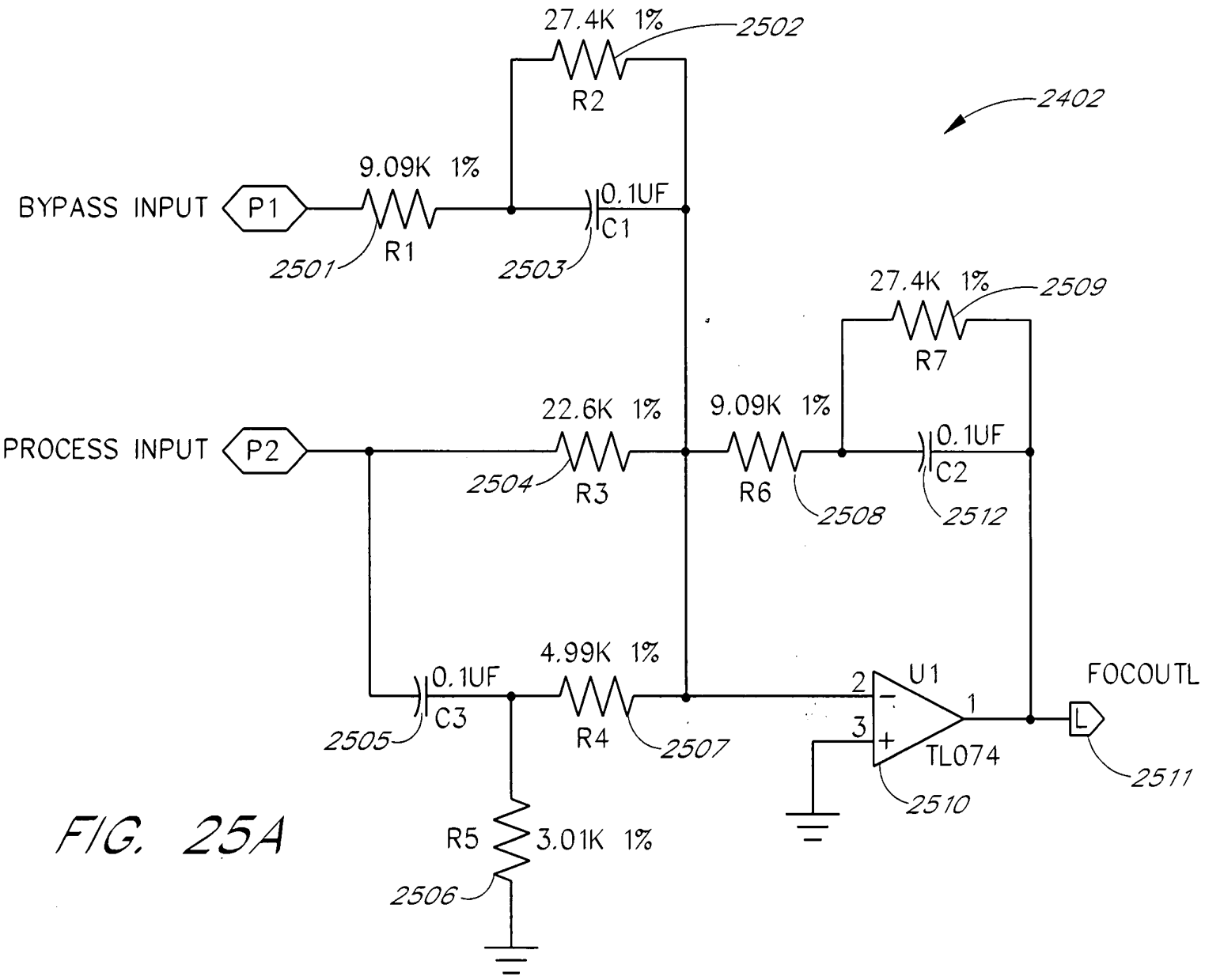


FIG. 25A

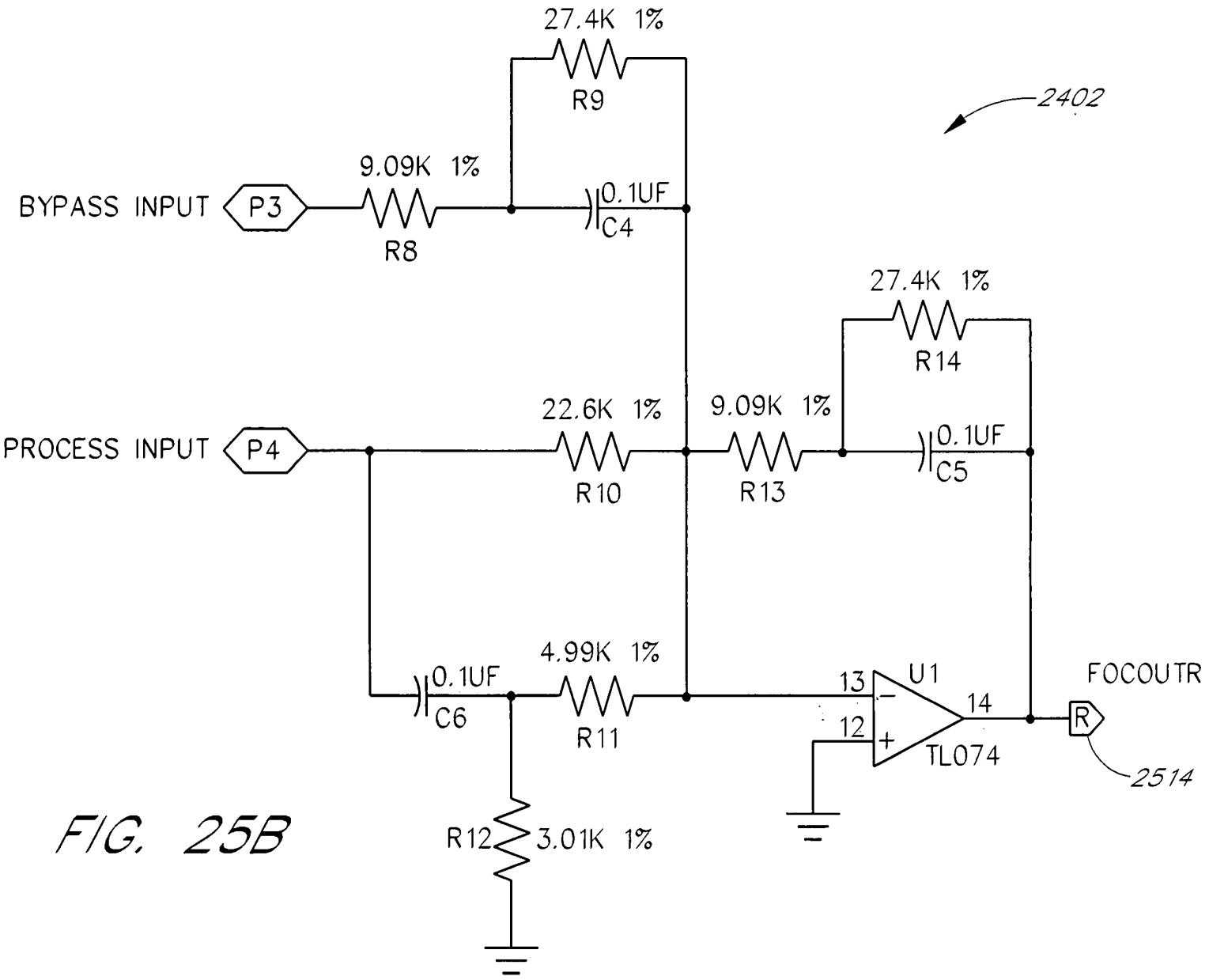


FIG. 25B

FIG. 26

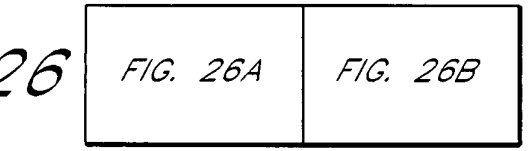


FIG. 26A

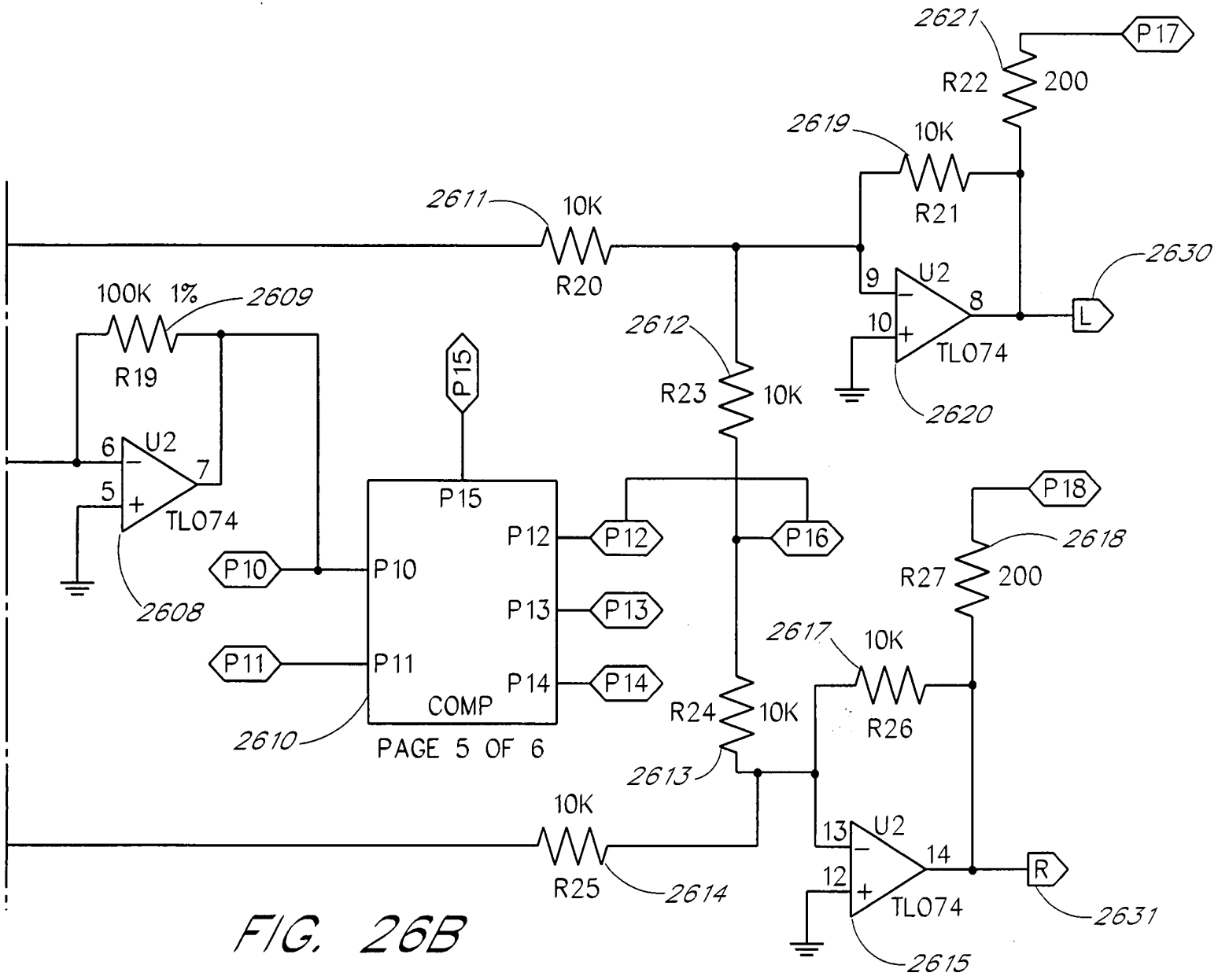


FIG. 26B

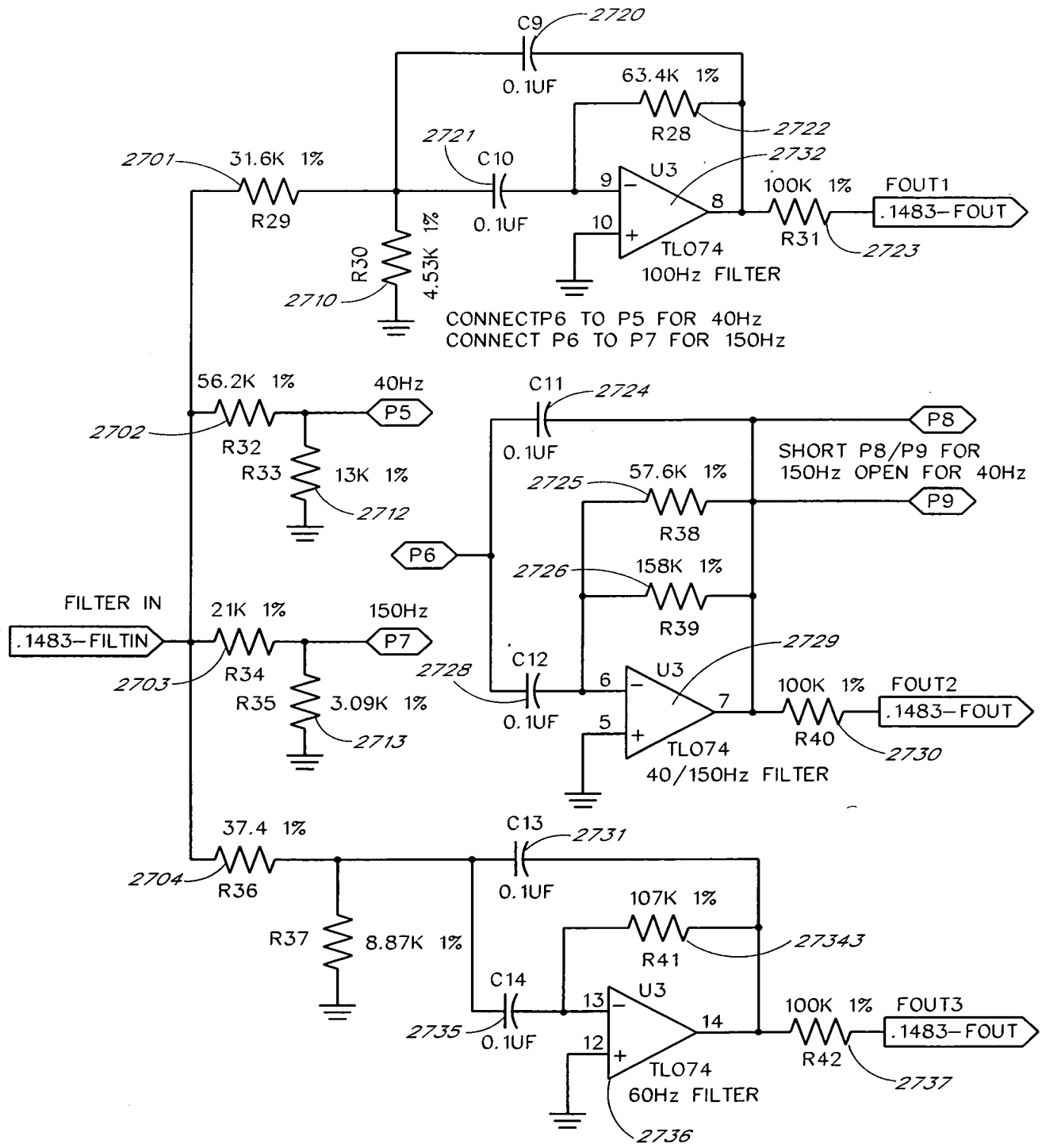

C9
2720
0.1UF
63.4K 1%
R28
2722
2721
C10
2732
U3
2701
31.6K 1%
R29
9
8
100K 1%
FOUT1
.1483-FOUT
R31
2723
0.1UF
10
TLO74
100Hz FILTER
R30
4.53K 1%
2710
CONNECTP6 TO P5 FOR 40Hz
CONNECT P6 TO P7 FOR 150Hz
56.2K 1%
40Hz
P5
2702
R32
R33
13K 1%
2712
C11
2724
0.1UF
P8
SHORT P8/P9 FOR
150Hz OPEN FOR 40Hz
57.6K 1%
2725
R38
P9
P6
2726
158K 1%
R39
FILTER IN
.1483-FILTIN
21K 1%
150Hz
P7
2703
R34
R35
3.09K 1%
2713
2729
C12
2728
U3
6
7
100K 1%
FOUT2
.1483-FOUT
0.1UF
5
TLO74
40/150Hz FILTER
R40
2730
37.4 1%
C13
2731
2704
R36
0.1UF
107K 1%
R37
8.87K 1%
27343
R41
C14
U3
13
14
100K 1%
FOUT3
.1483-FOUT
2735
0.1UF
12
TLO74
60Hz FILTER
R42
2737
2736

FIG. 27

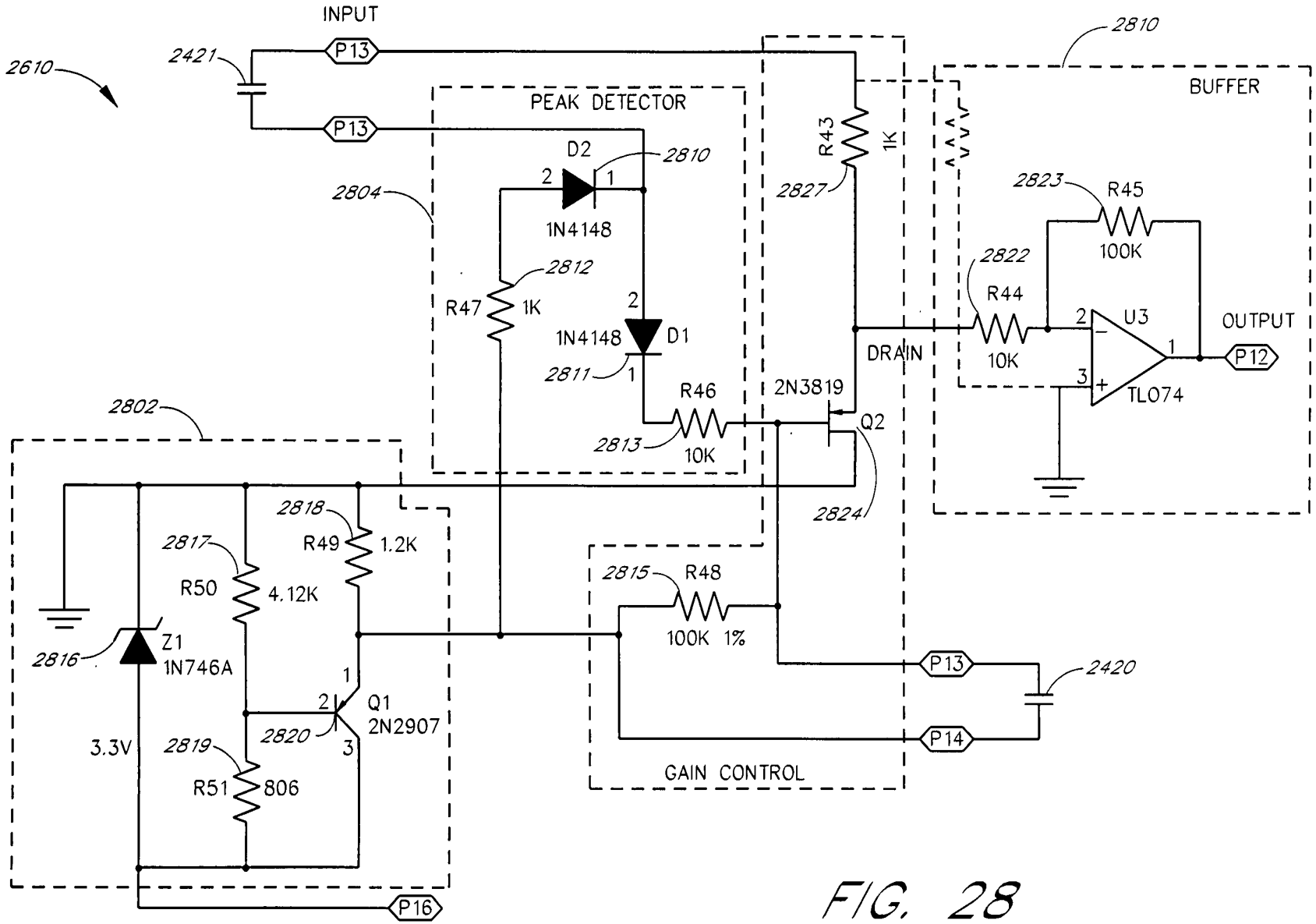
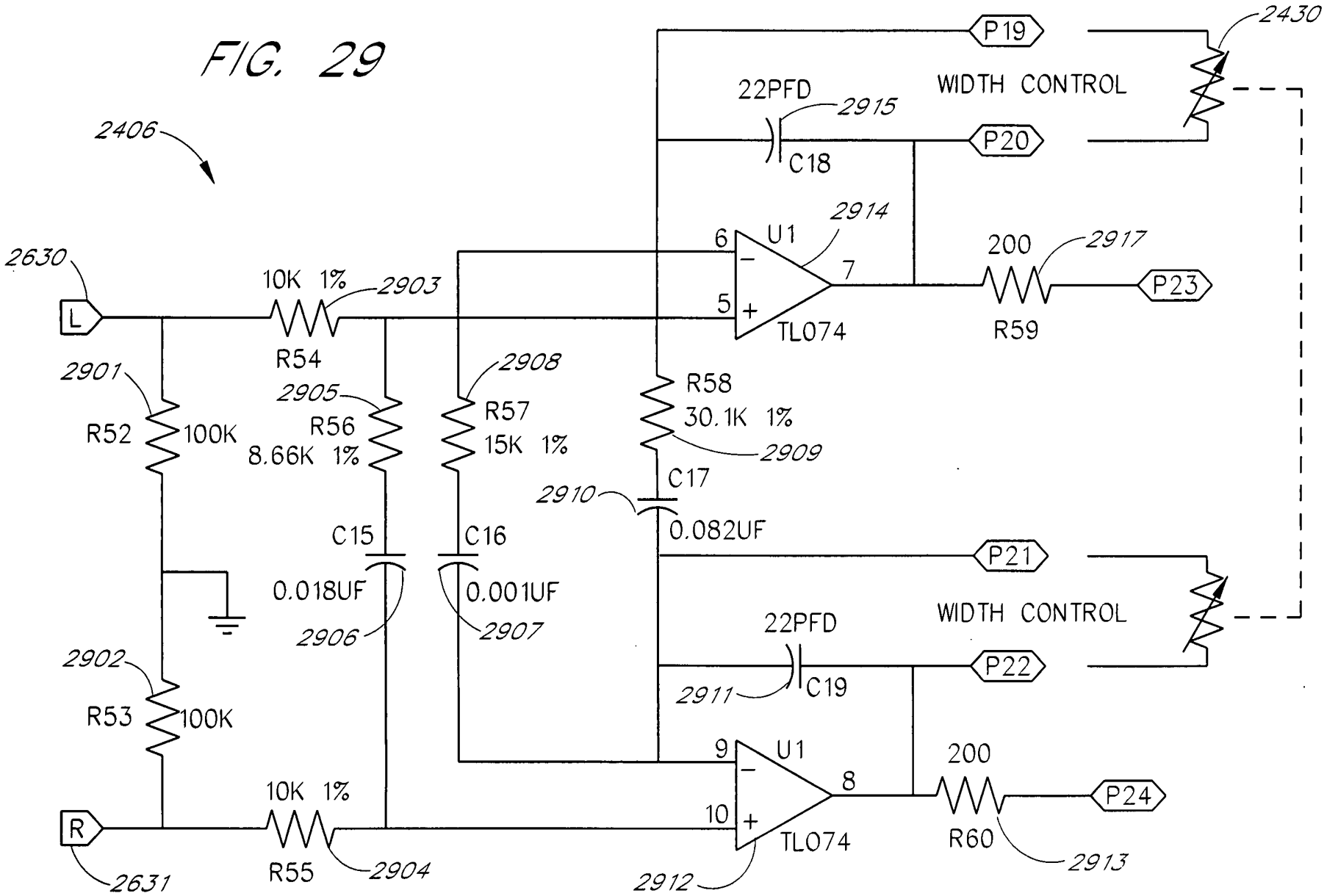


FIG. 28

FIG. 29


2406
2630
L
10K 1%
2903
R54
2901
R52
100K
2905
R56
8.66K 1%
2908
R57
15K 1%
R58
30.1K 1%
2909
C17
2910
0.082UF
C15
0.018UF
2906
C16
0.001UF
2907
2902
R53
100K
R
2631
10K 1%
R55
2904
6
5
U1
TL074
2914
7
9
10
U1
TL074
2912
P19
22PFD
2915
C18
P20
WIDTH CONTROL
2430
200
2917
R59
P23
P21
22PFD
2911
C19
P22
WIDTH CONTROL
8
200
R60
2913
P24

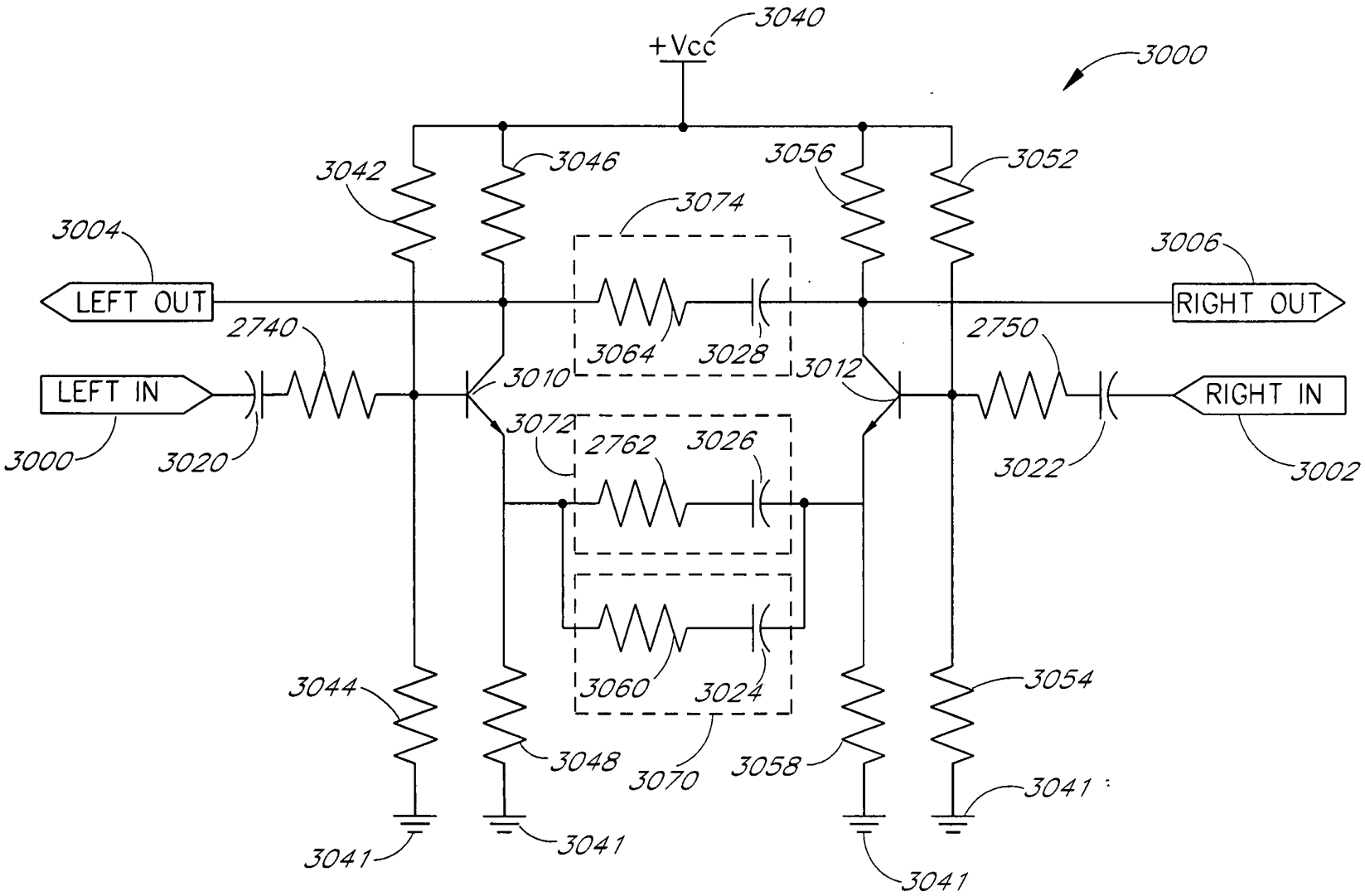


FIG. 30

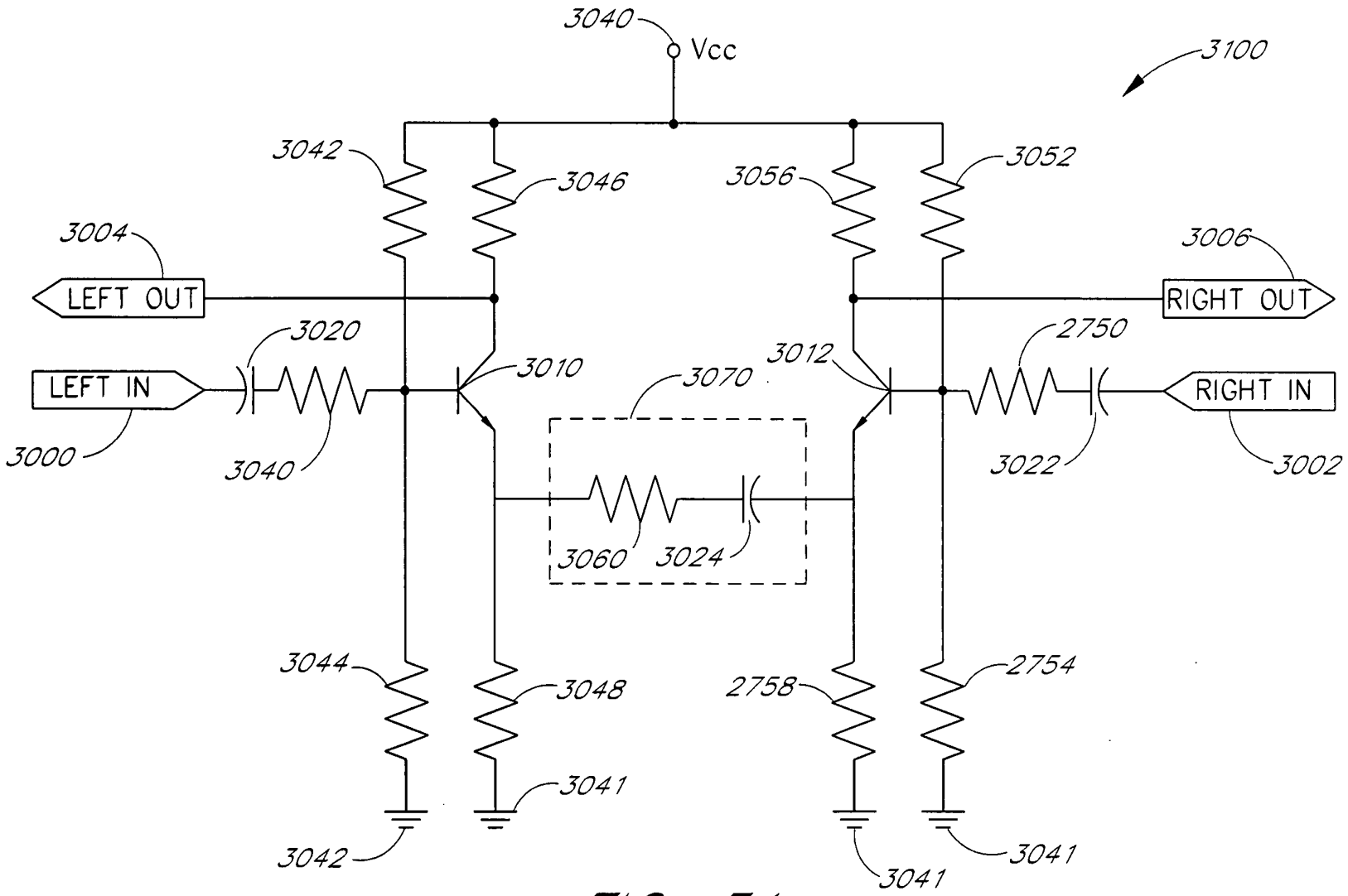


FIG. 31

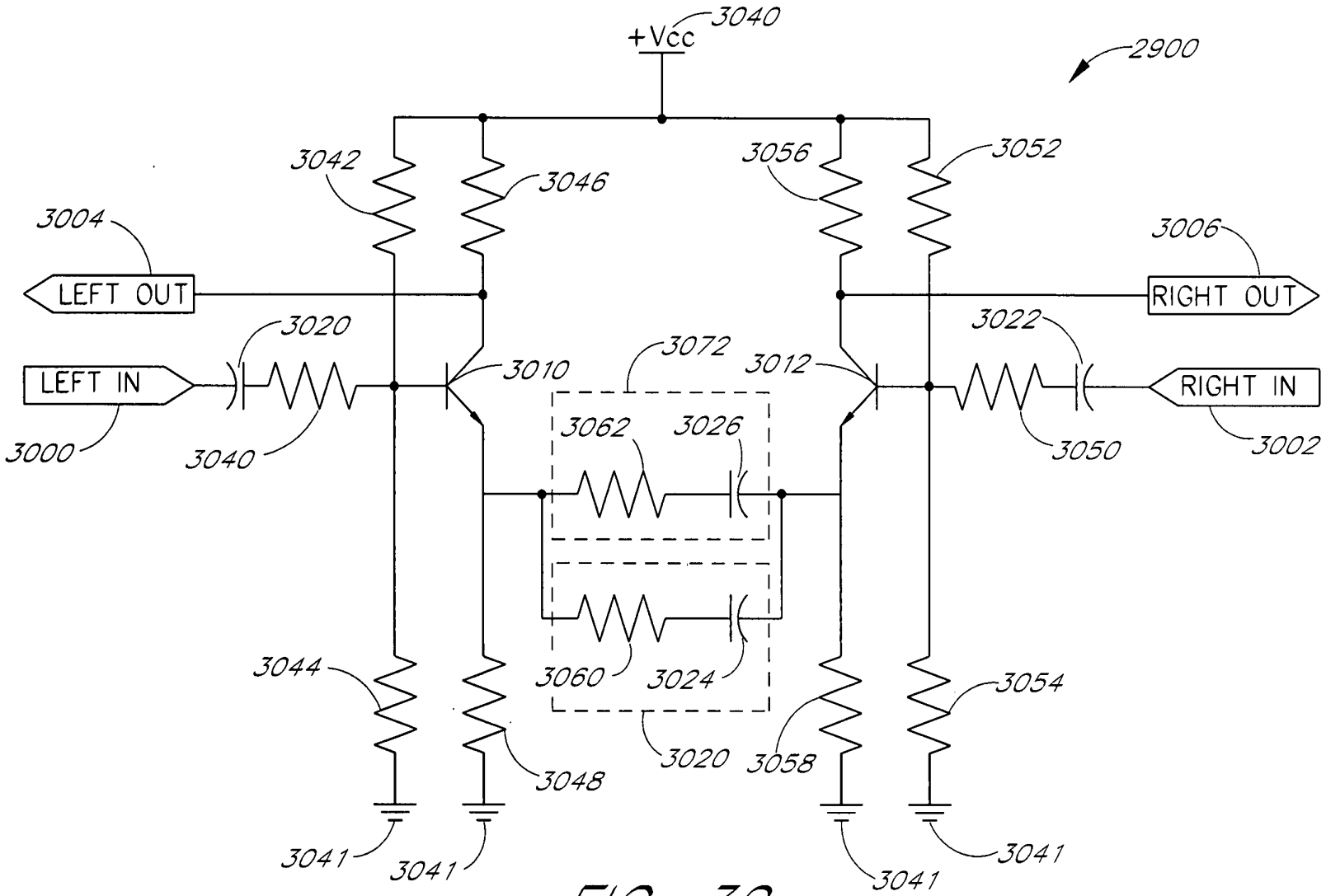


FIG. 32

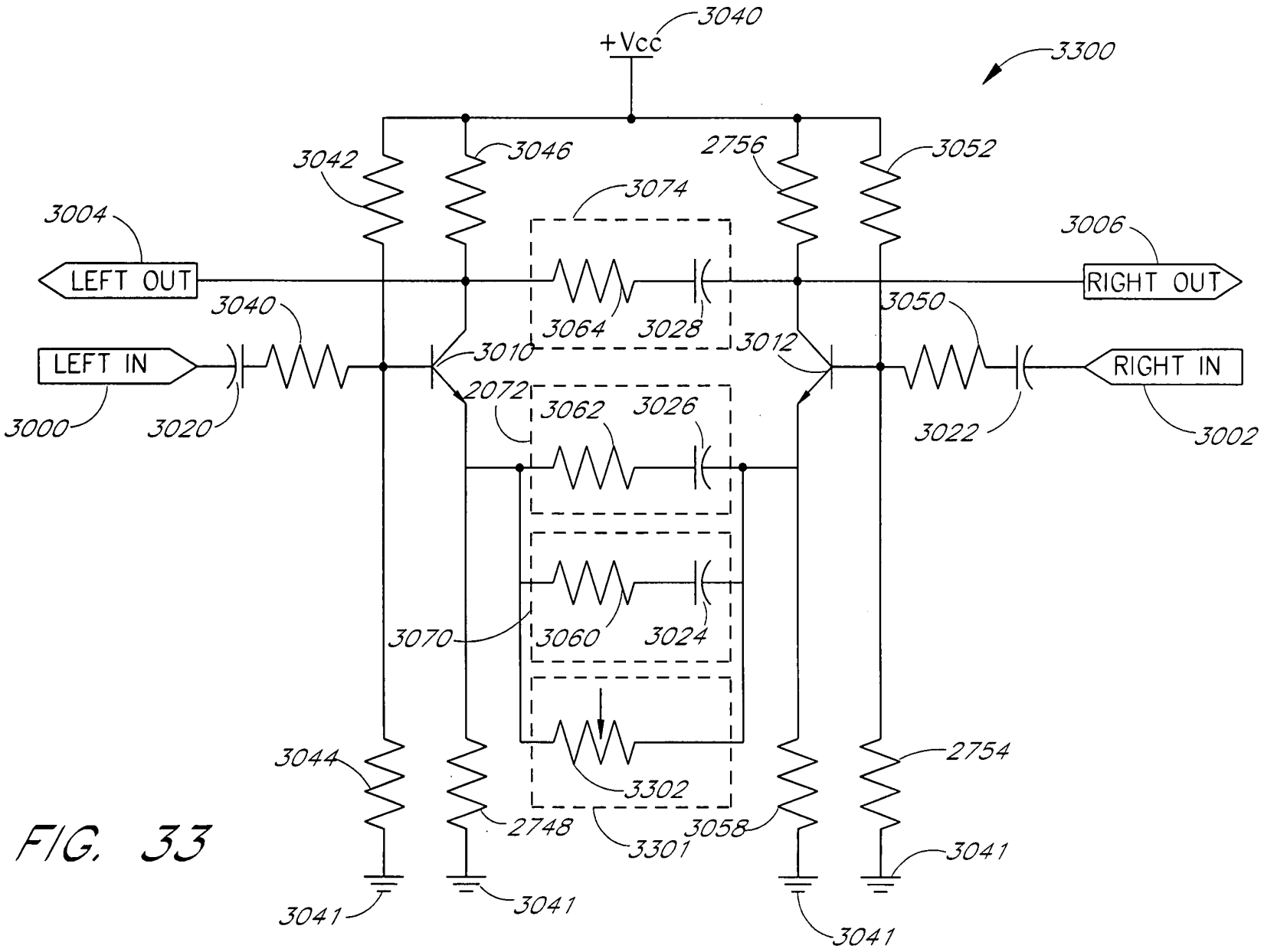


FIG. 33

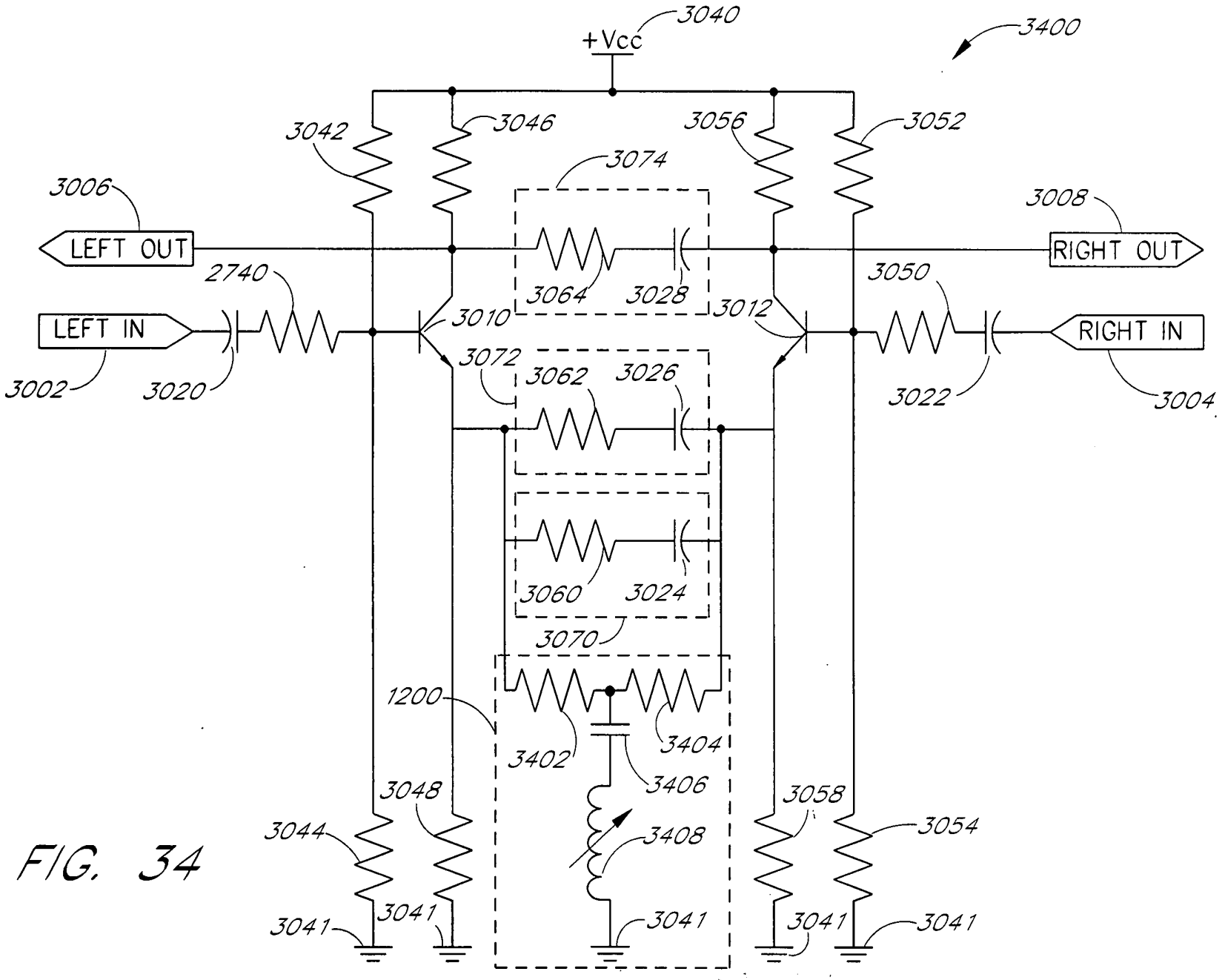


FIG. 34

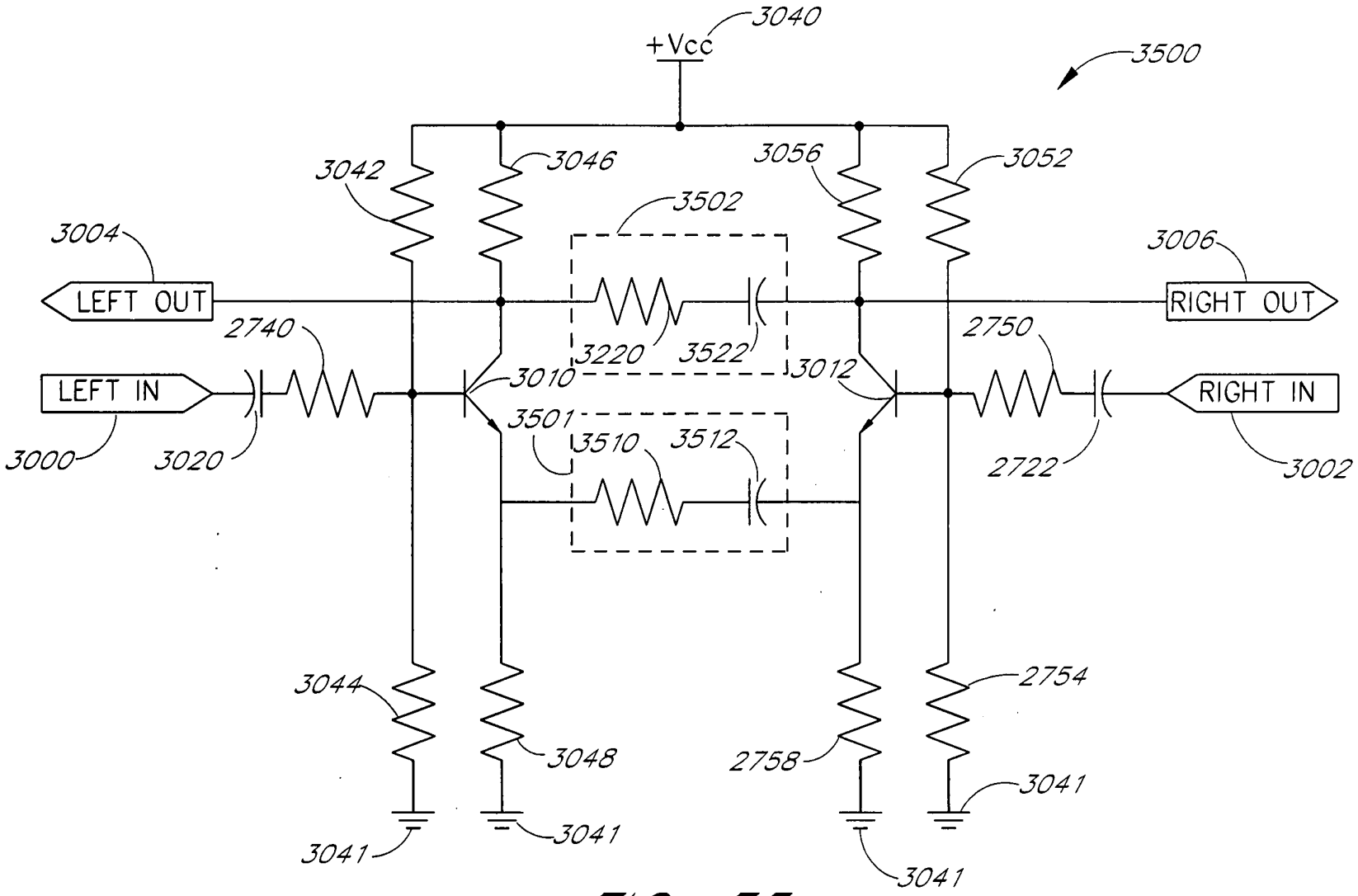


FIG. 35

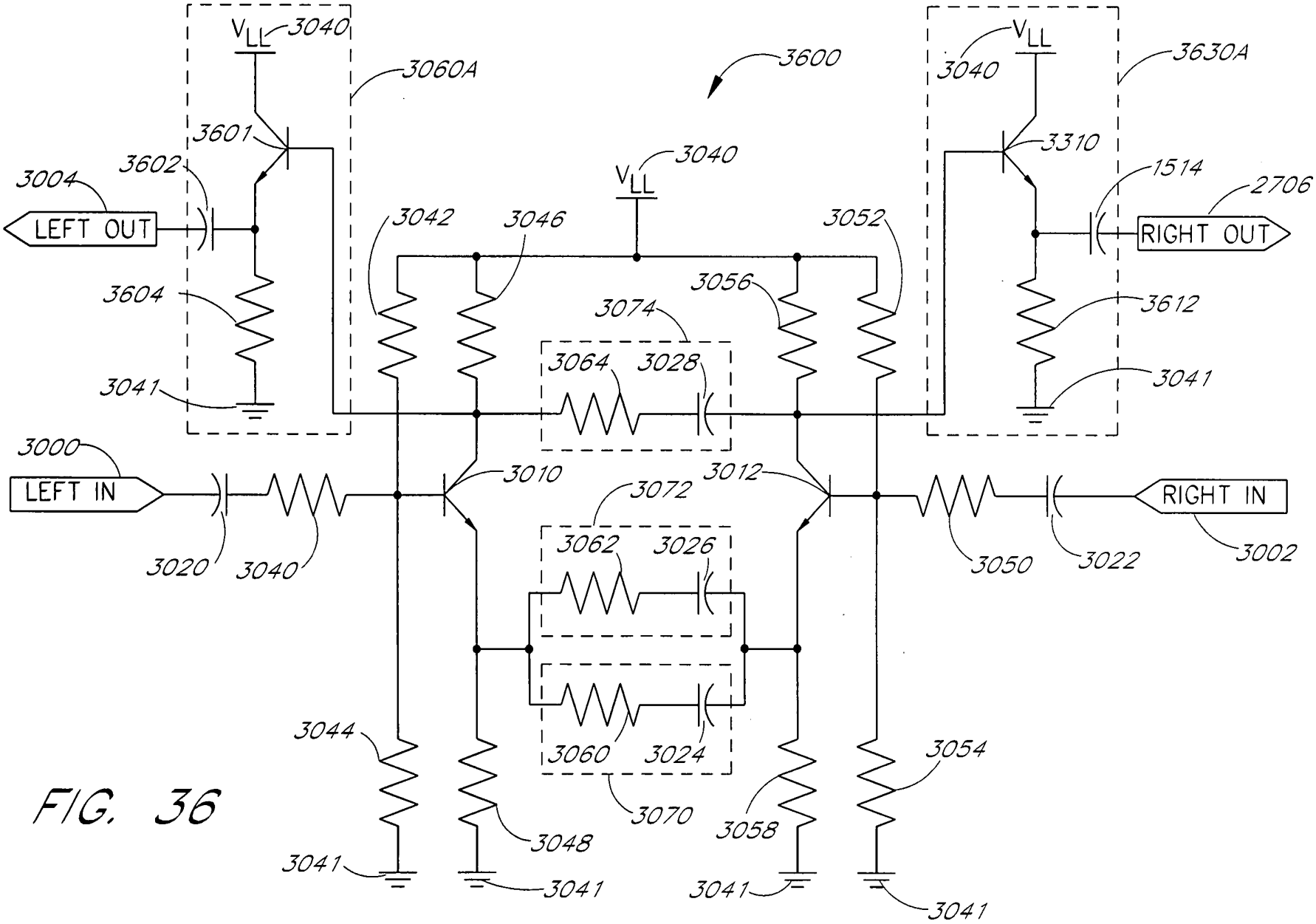


FIG. 36

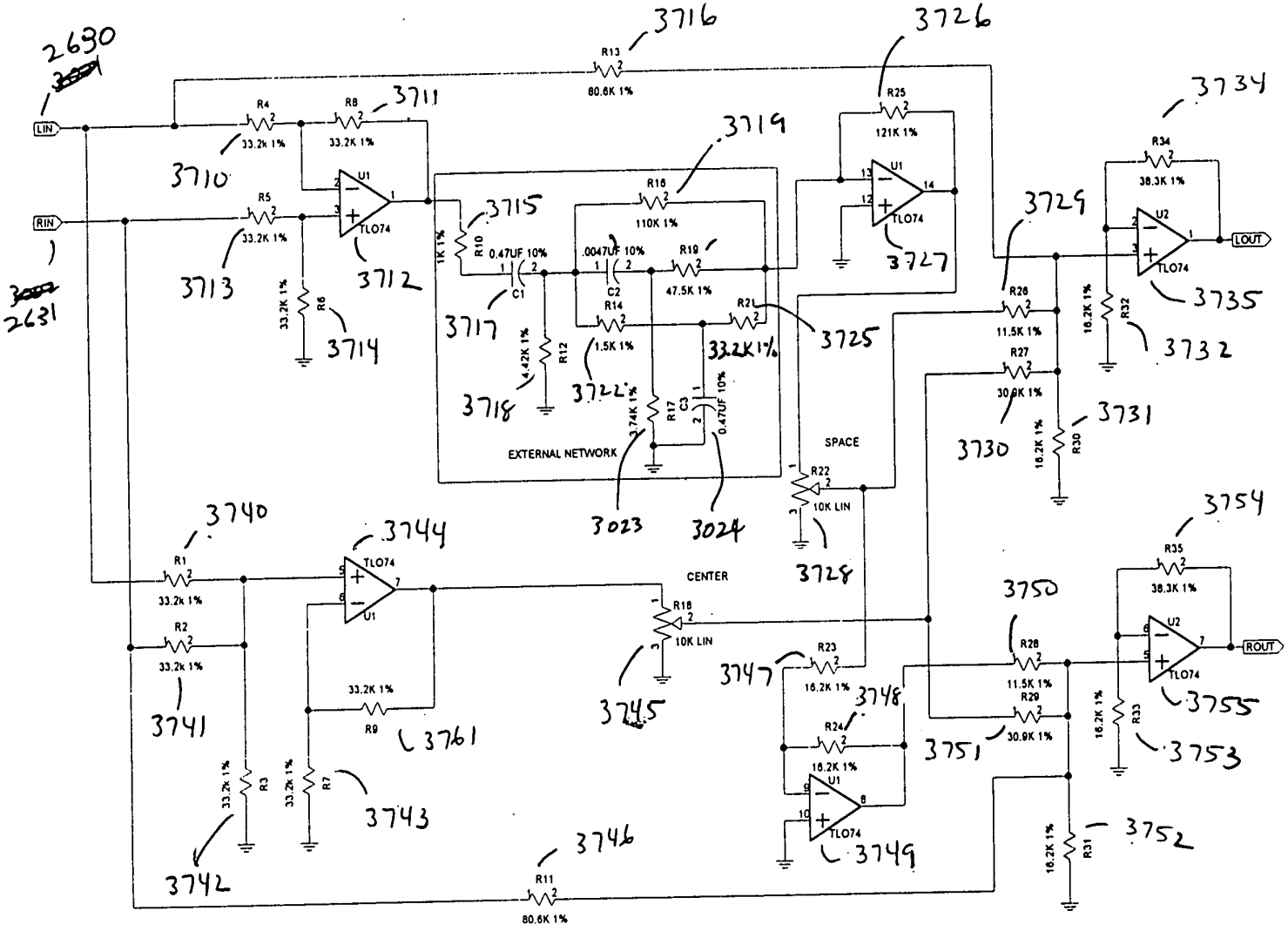
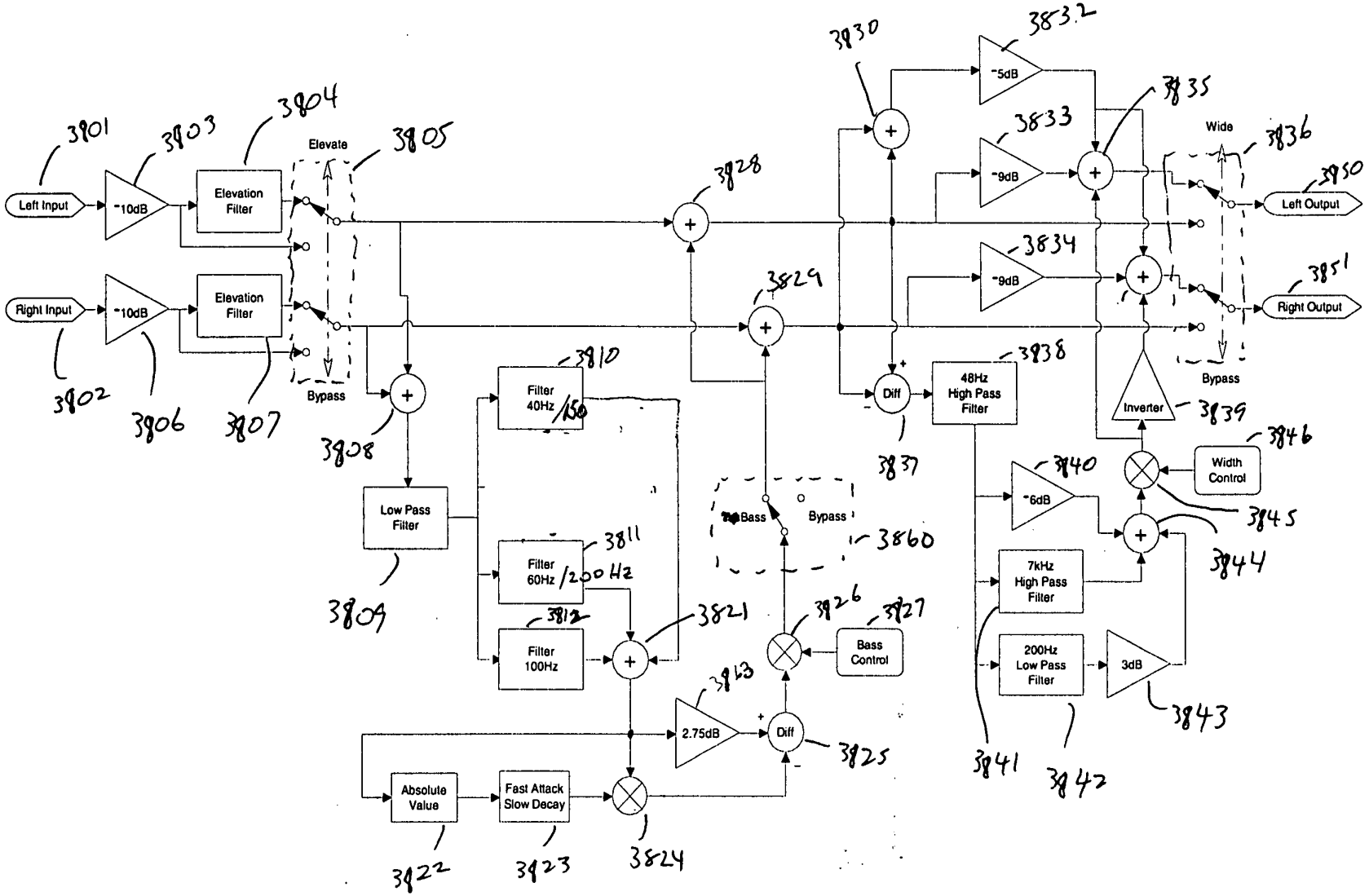


FIGURE 37


Left Input
Right Input
-10dB
-10dB
Elevation Filter
Elevation Filter
Elevate
Bypass
Low Pass Filter
Filter 40Hz /150
Filter 60Hz /200Hz
Filter 100Hz
Absolute Value
Fast Attack Slow Decay
2.75dB
Diff
Bass
Bypass
Bass Control
-5dB
-9dB
-9dB
Diff
48Hz High Pass Filter
-6dB
7kHz High Pass Filter
200Hz Low Pass Filter
3dB
Inverter
Wide
Bypass
Width Control
Left Output
Right Output
3901
3902
3903
3904
3905
3906
3907
3908
3909
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3911
3912
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3851

FIGURE 38

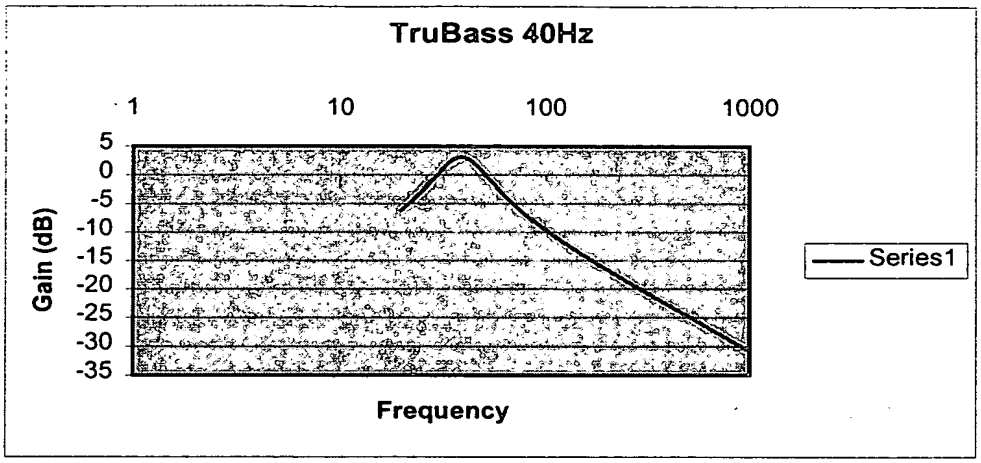
TruBass 40Hz
1
10
100
1000
5
0
-5
-10
-15
-20
-25
-30
-35
Gain (dB)
Frequency
Series1

Figure 39

60Hz Bandpass

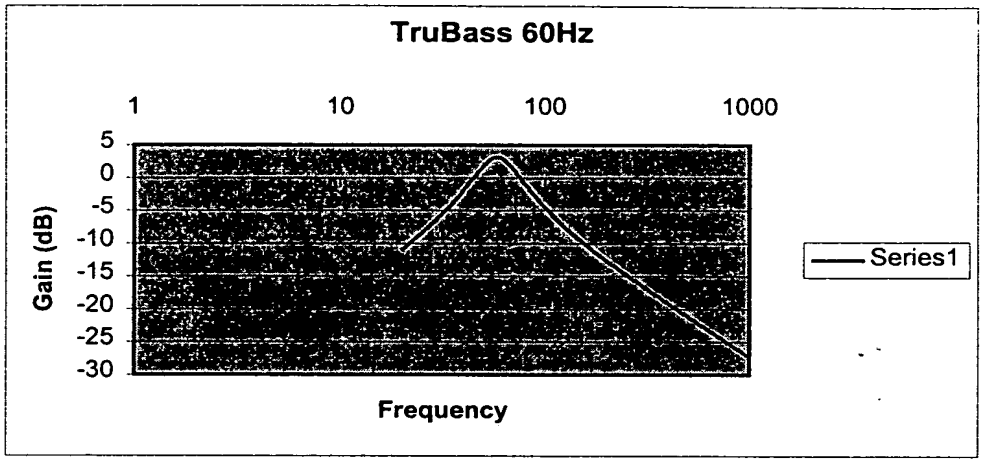

Figure 40

100Hz Bandpass

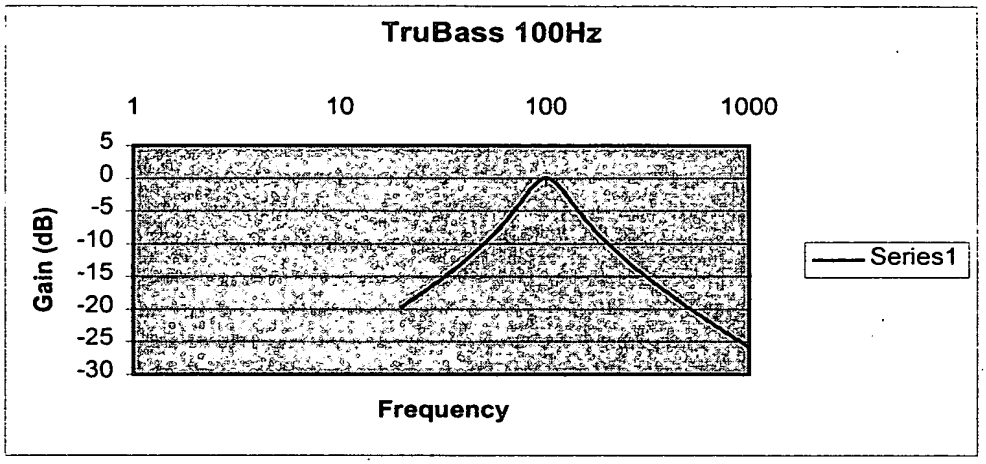

Figure 41

150Hz Bandpass

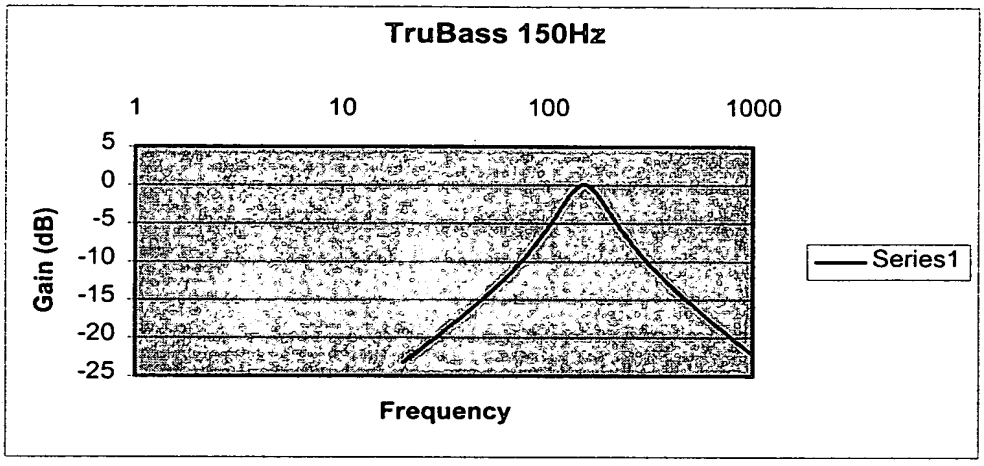

Figure 42

200Hz Bandpass

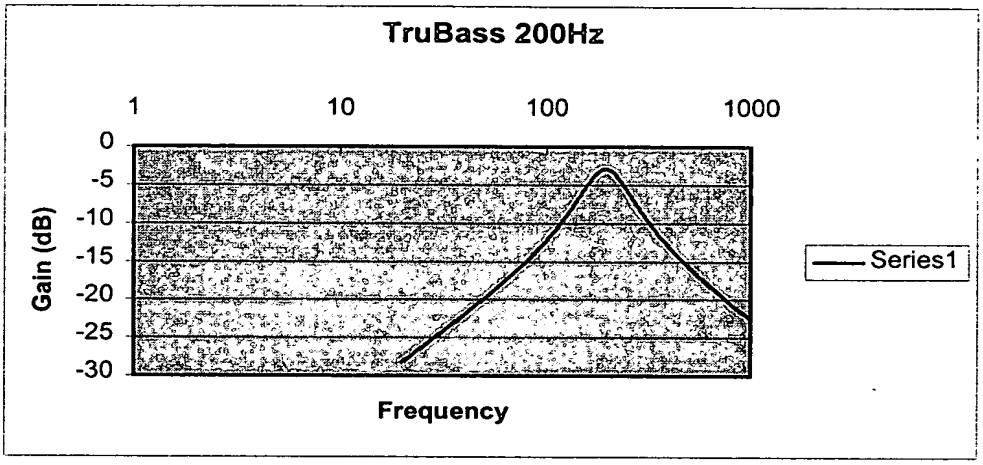

Figure 43

Lowpass

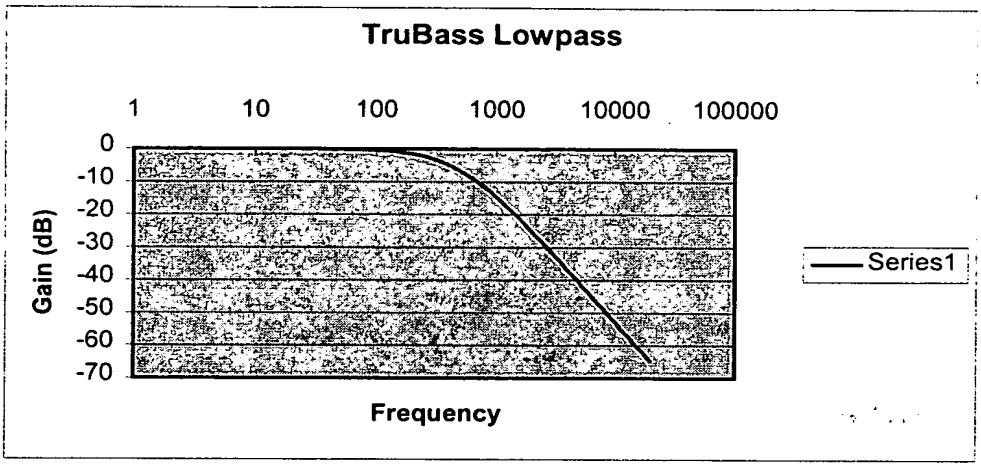

Figure 44